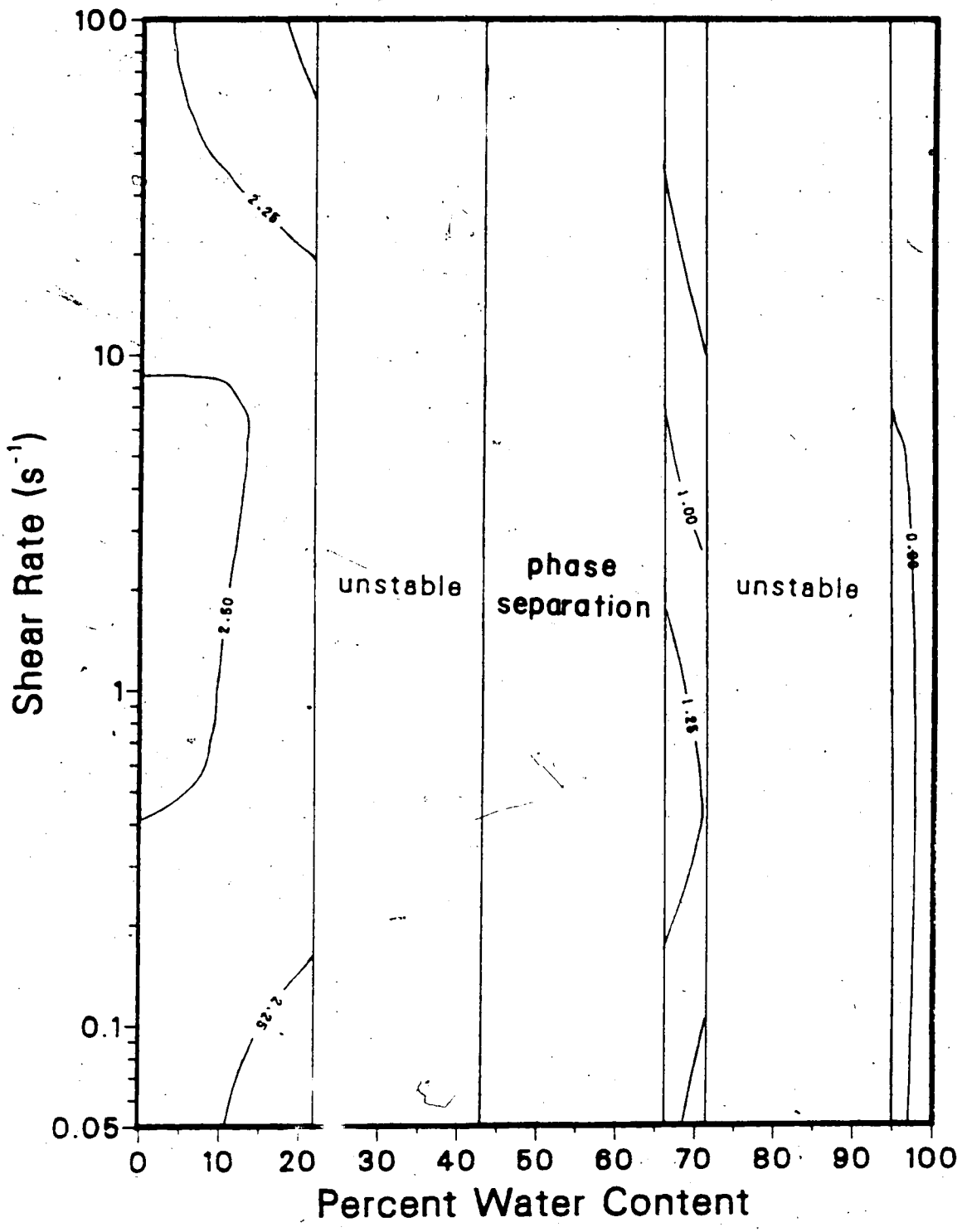

Figure 4.13. Log_{10} viscosity as a function of water content and shear rate for Epping emulsions at 75°C.

data for the Epping emulsions with water contents between 43% and 67%, at 75°C. Epping 43.2% begins to separate at 40°C, suggesting that the phase inversion region is shifting towards the 50:50 water to oil ratio.

Much of the above descriptions apply to the Primrose emulsions (see Figures 4.14 to 4.17). As the water content of the emulsions increases the viscosity increases, until the instability region is reached (32% to 40%). Above the instability region, dual emulsions exhibiting shear thinning behavior exist. The viscosity of the emulsions also decreases as the water content increases, and for this oil, there is a smooth transition from water continuous dual emulsions to water continuous simple emulsions at about 72%. This occurs because the size of the water droplets in the dispersions of 72% or more are too small to accommodate the similarly sized secondary droplets.

Primrose dual emulsions also suffered phase separation, but not to the same degree as the Epping and Wainwright B dual emulsions. Primrose 44.8% and 48% both suffered some separation while being heated from 43°C to 60°C. The separation was more significant for Primrose 44.8% emulsion above 60°C. This again suggests shifting of the instability zone, and degradation above the temperature of formation. Generally though, the Primrose emulsions were less sensitive to thermal degradation, perhaps due to the presence of natural surfactants.

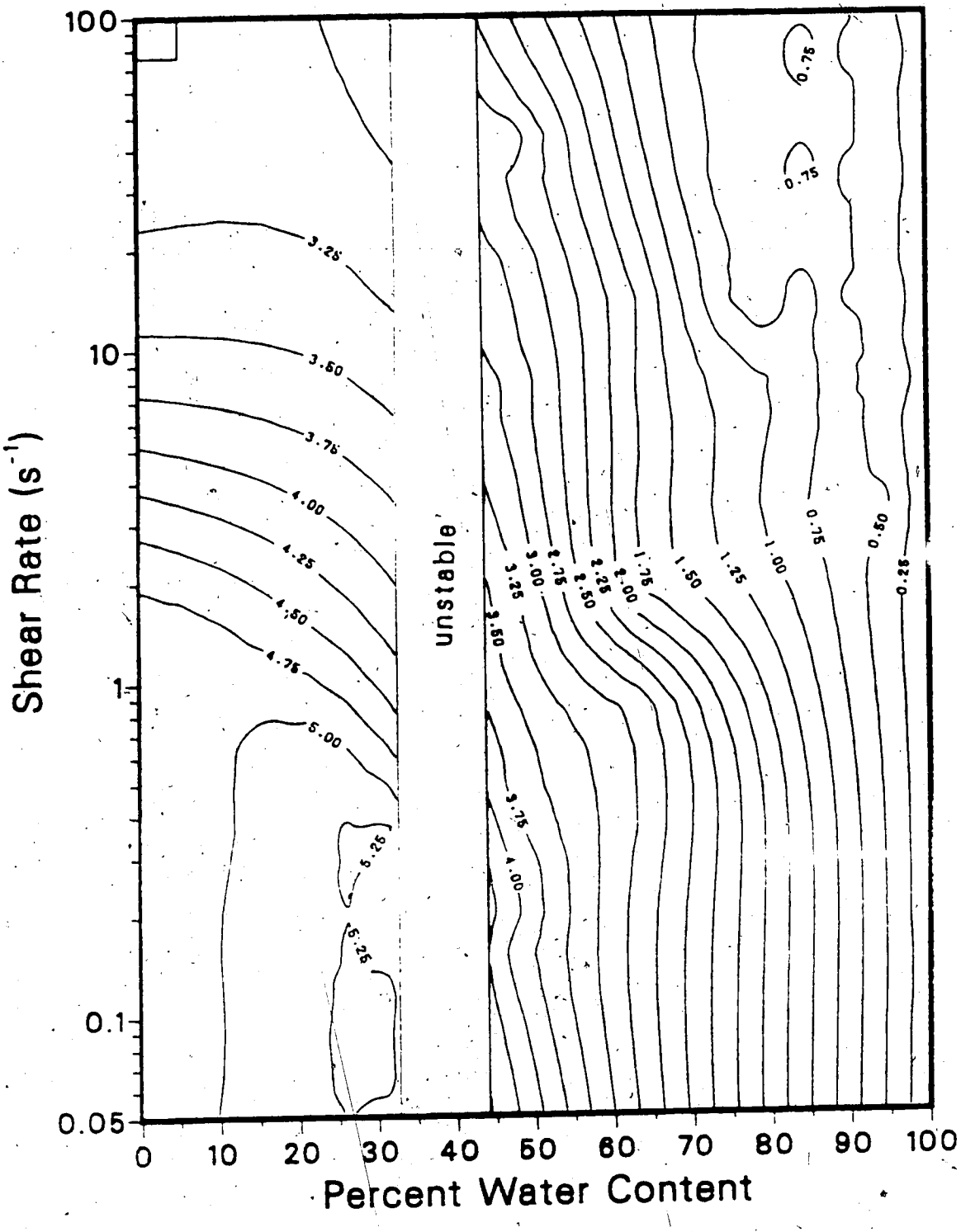

Figure 4.14. Log_{10} viscosity as a function of water content and shear rate for Primrose emulsions at 23°C.

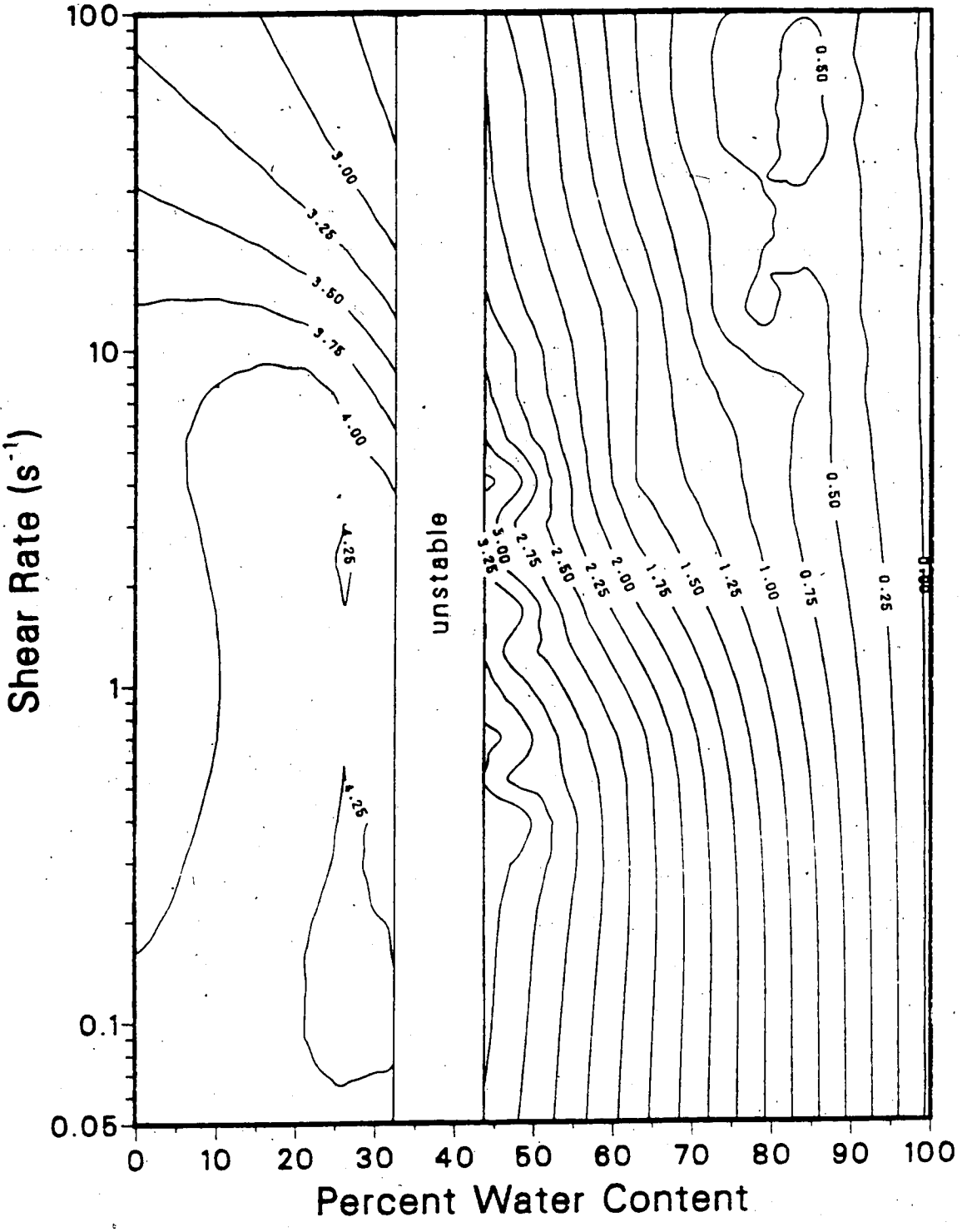

Figure 4.15. Log_{10} viscosity as a function of water content and shear rate for Primrose emulsions at 43°C.

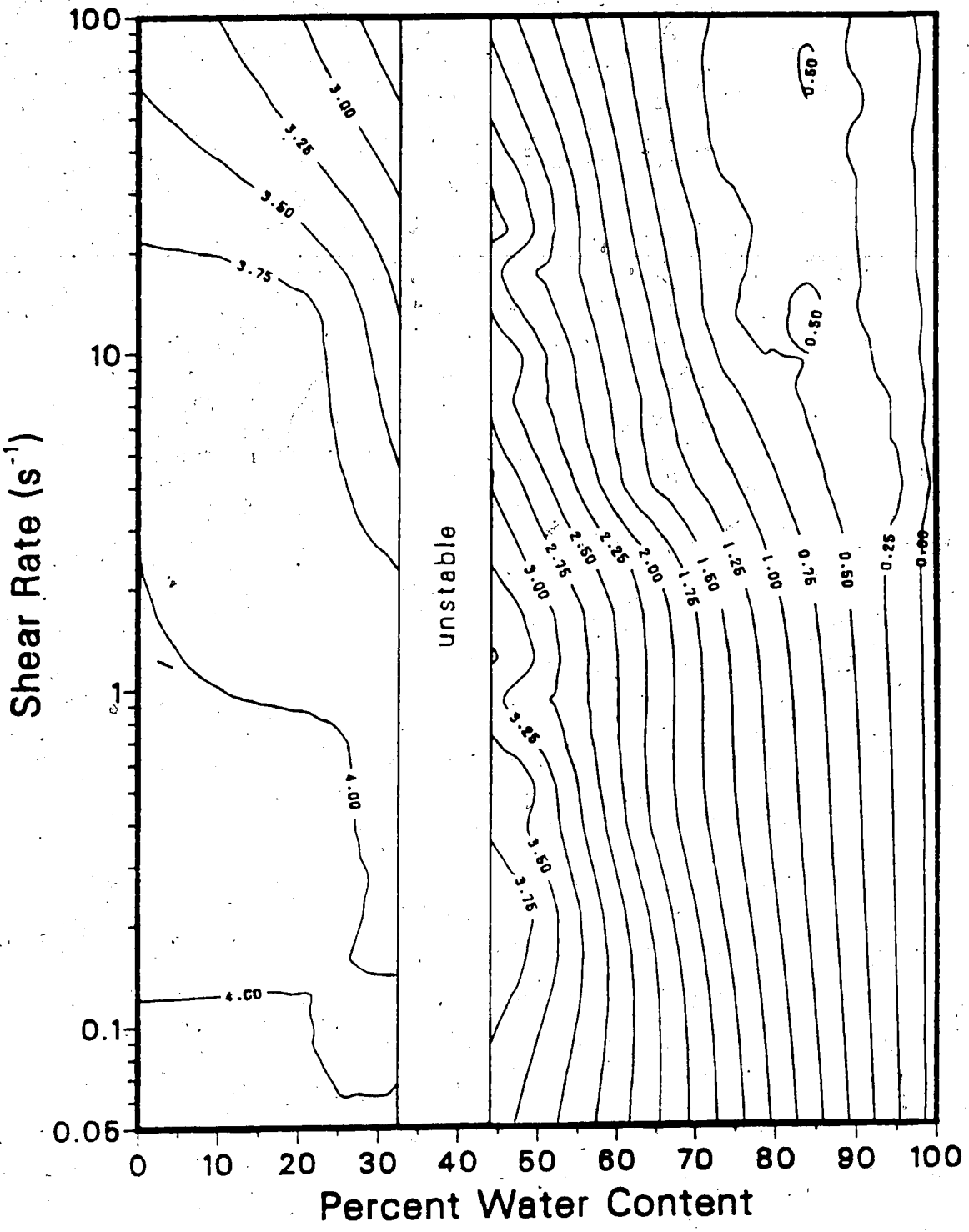

Figure 4.16. Log_{10} viscosity as a function of water content and shear rate for Primrose emulsions at 53°C.

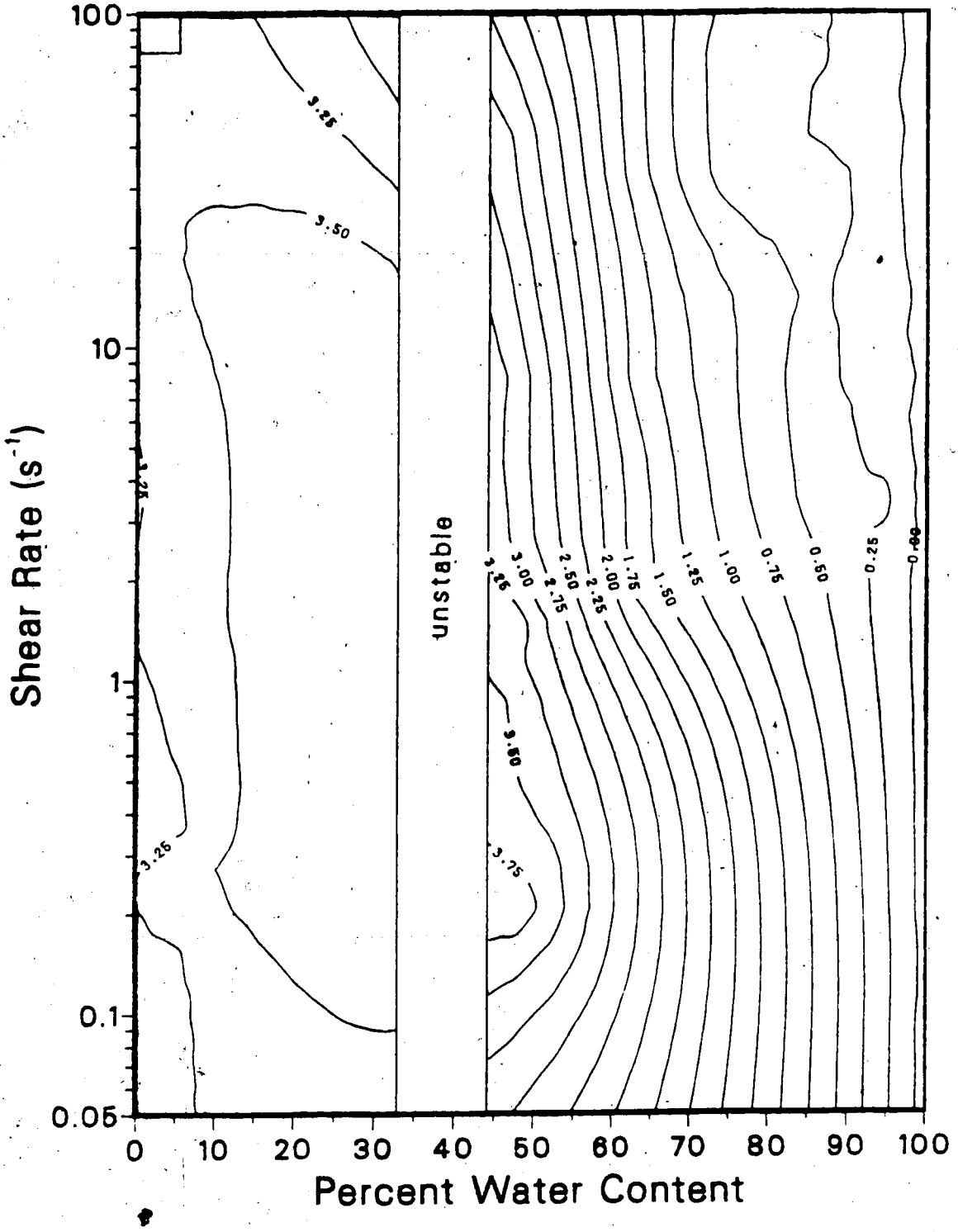

Figure 4.17. Log_{10} viscosity as a function of water content and shear rate for Primrose emulsions at 63°C.

Characterization of the rheological behavior of the emulsions was achieved by fitting the power law model to the data. This was appropriate since the second term of equation A.9 (of Appendix A) was negligibly small (κ' was very small). Employing a logarithmic transformation, the power law model was fitted to the data by linear regression (correlation coefficients squared of a least 0.95, and often 1.00 were obtained). The dependence of the power law coefficients on temperature, emulsion water content, morphology and oil type was then examined.

For each emulsion, the consistency index and the shear thinning index were determined from the shear stress and shear rate data of Appendix B. Figures 4.18, 4.19, and 4.20 show the dependence of the shear thinning index as a function of temperature and water content. Each line in Figure 4.18, for example, indicates the temperature dependence of a particular emulsion. Since there are at most four datum points for each curve, the points are connected rather than curve-fit with a best-fit line or curve, indicating, therefore, trends only.

Each of the dried oils shows slightly shear thinning behavior, as do all of the low dispersed phase content Primrose emulsions; this behavior is independent of temperature. The Epping and Wainwright B W/O emulsions have very slightly shear thinning, almost Newtonian, behavior, which is independent of temperature (see Figures 4.18 and 4.19). With the exception of the anomalous Wainwright B

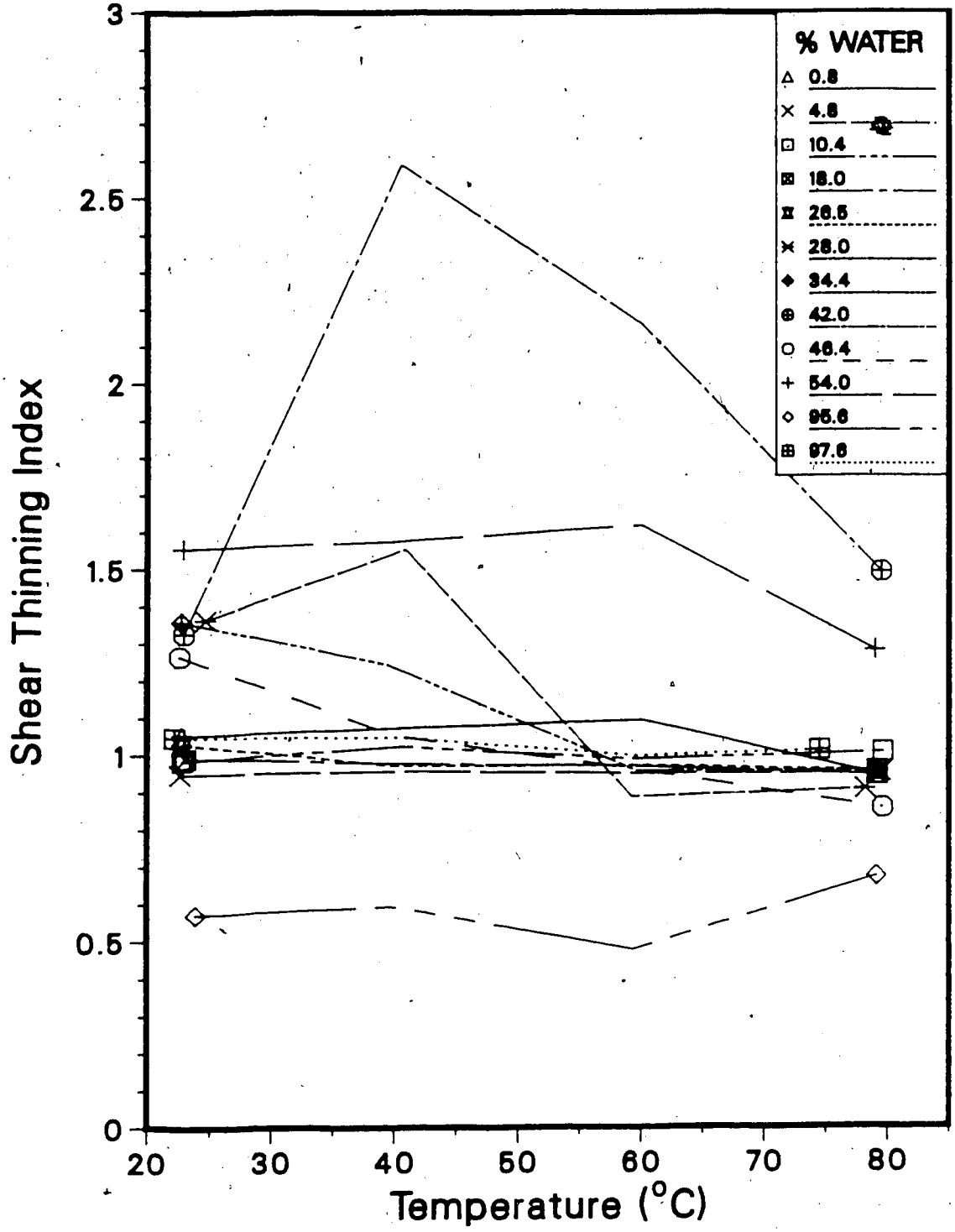

Figure 4.18. Shear thinning index as a function of temperature and water content for Wainwright B emulsions.

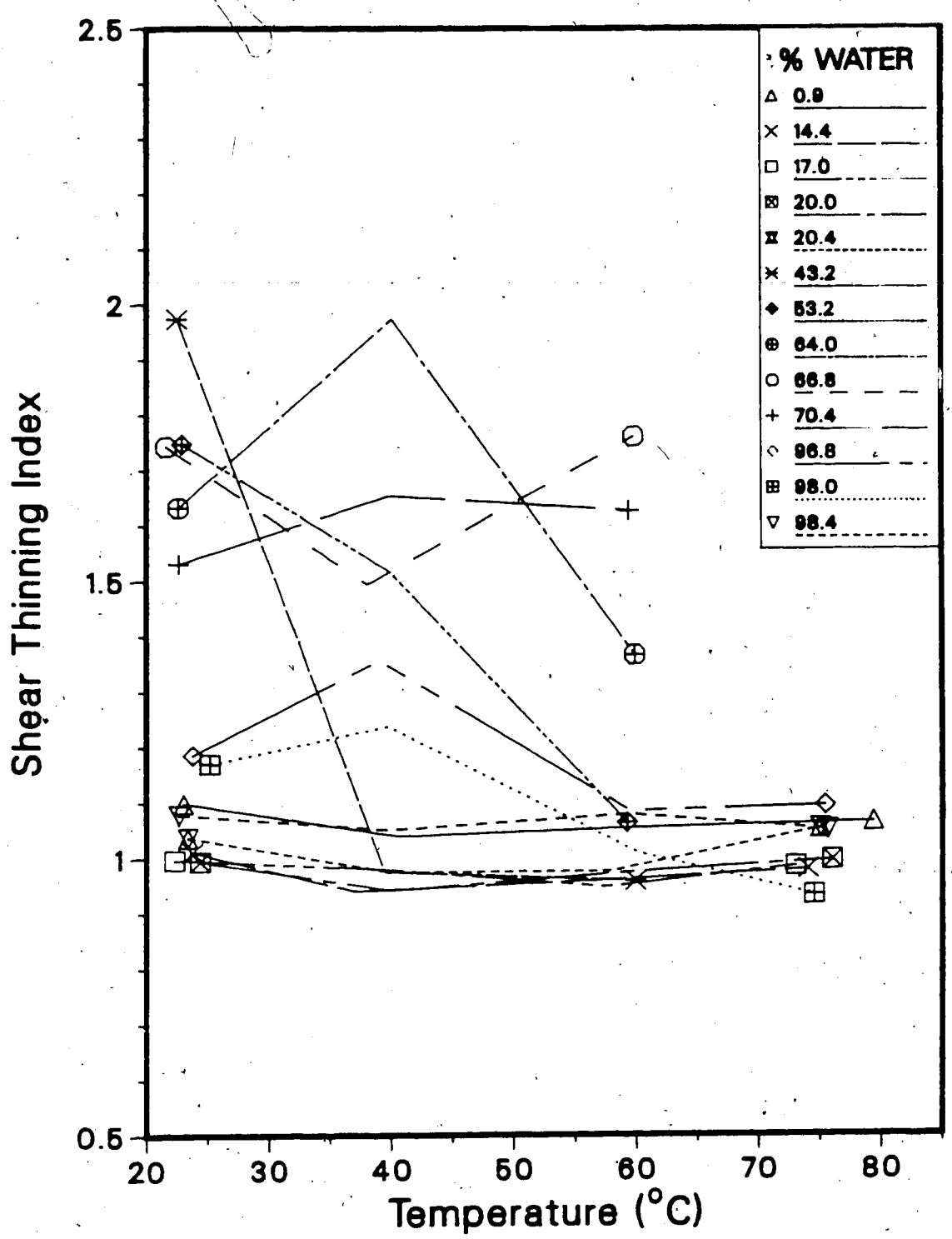

Figure 4.19. Shear thinning index as a function of temperature and water content for Epping emulsions.

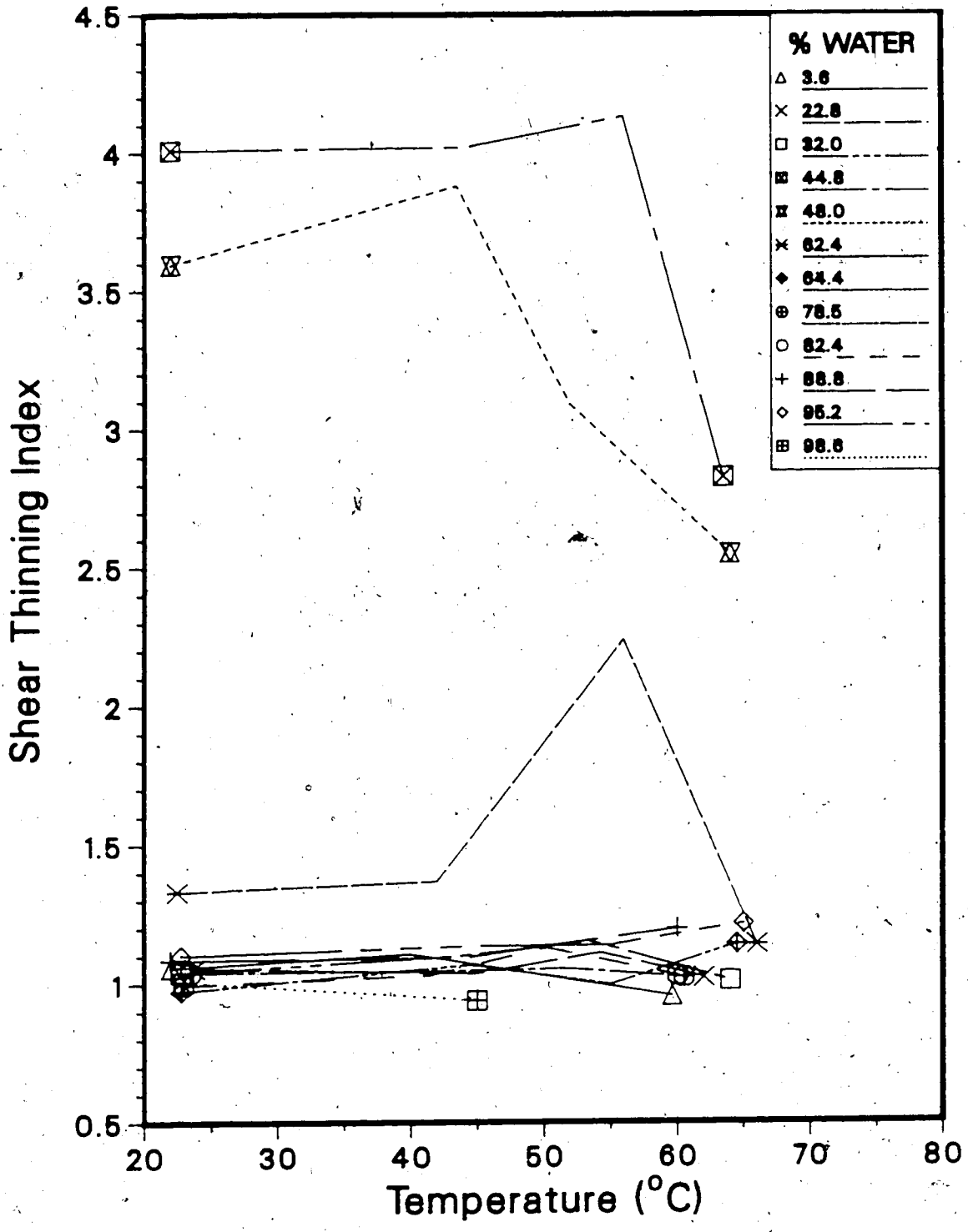

Figure 4.20. Shear thinning index as a function of temperature and water content for Primrose emulsions.

95.6% emulsion, all of the Epping and Wainwright B O/W emulsions have essentially temperature independent shear thinning behavior.

The dual emulsions of each oil show varying degrees of shear thinning behavior at low temperature. As the temperature rises the shear thinning index varies, but generally seems to decline towards unity, as indicated in Figures 4.18, 4.19, and 4.20. For the Wainwright B and Epping emulsions, the variability of the shear thinning index begins at about 40°C and for the Primrose emulsions, begins between 40°C and 60°C. This suggests that a morphological change begins at this temperature, implying that the emulsion's formation temperature is important to the stability of dual emulsions.

Figures 4.21, 4.22, and 4.23 show the dependence of the consistency index on temperature and water content for the Wainwright B, Epping, and Primrose emulsions respectively. The consistency indices of the emulsions of each oil appear to be proportional to the inverse of the temperature: the data suggest a non-linear relationship, but more data would be needed to confirm this. There are a few exceptions to this trend (for example, Epping 70.4% and Wainwright B 42.0%), but generally, the consistency index decreases with increasing temperature.

Most equations proposed in the literature to describe the viscosity of a suspension are in the form of some function of concentration multiplied by the viscosity of the

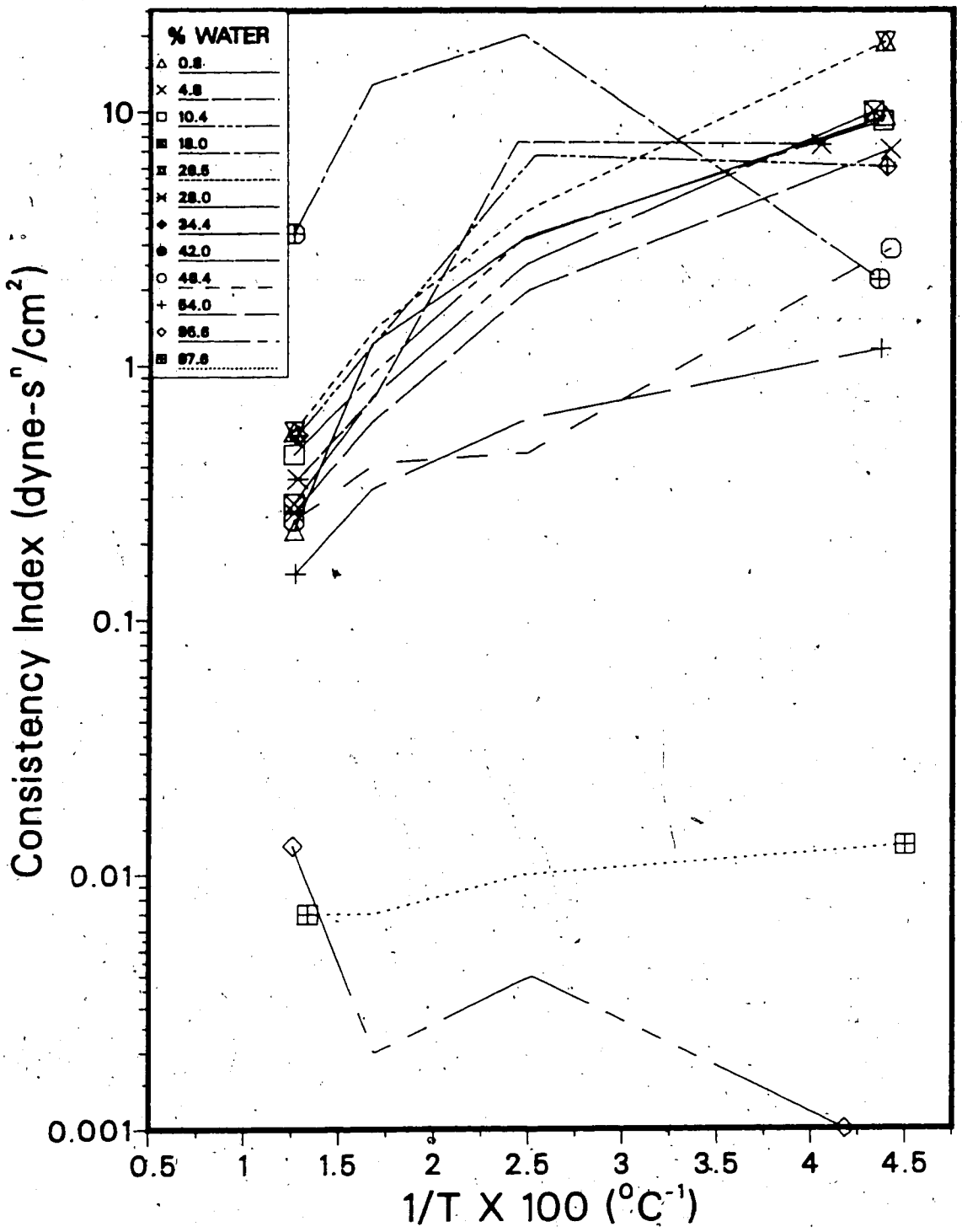

Figure 4.21. Consistency index as a function of inverse temperature and water content for Wainwright B emulsions.

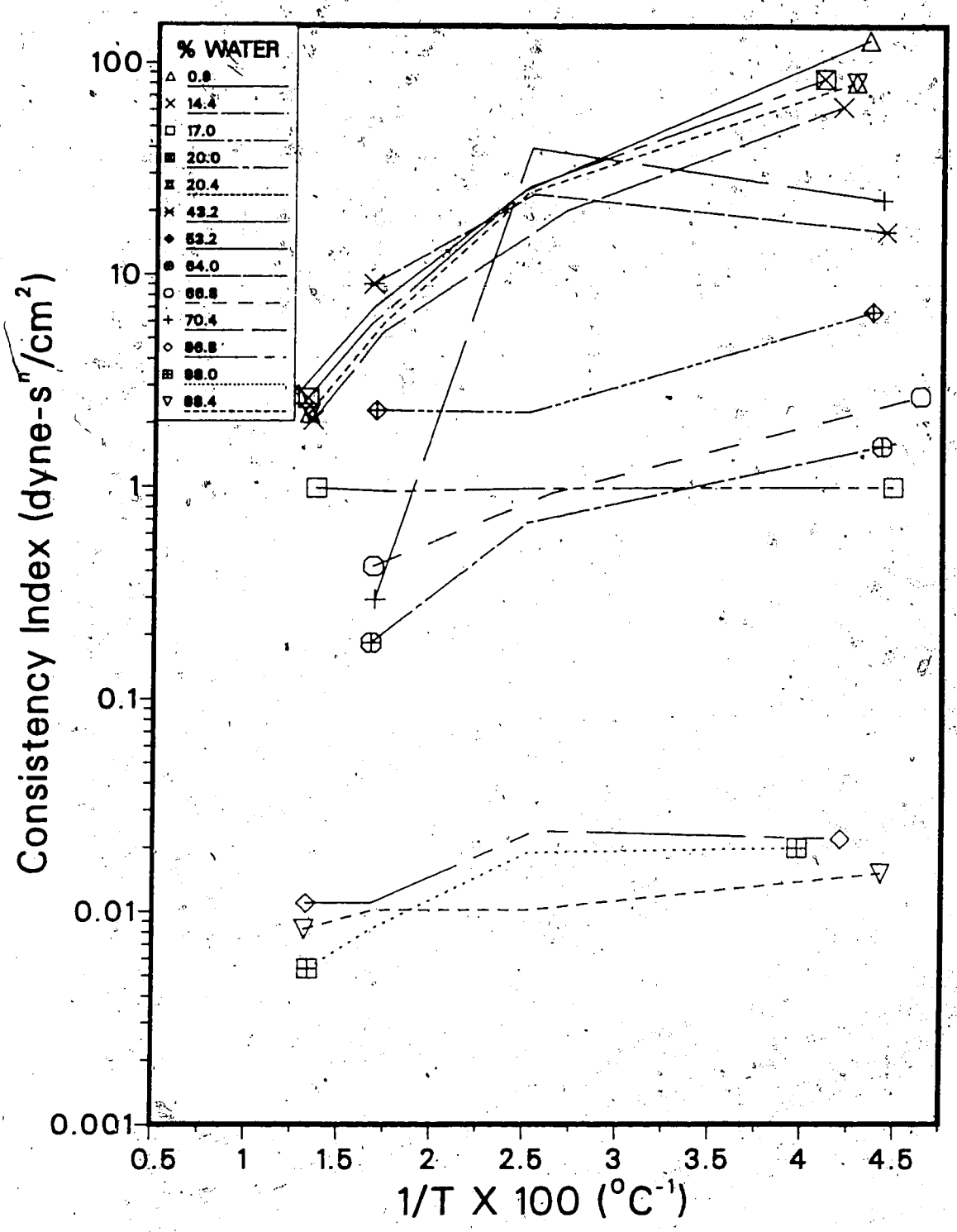

Figure 4.22. Consistency index as a function of inverse temperature and water content for Epping emulsions.

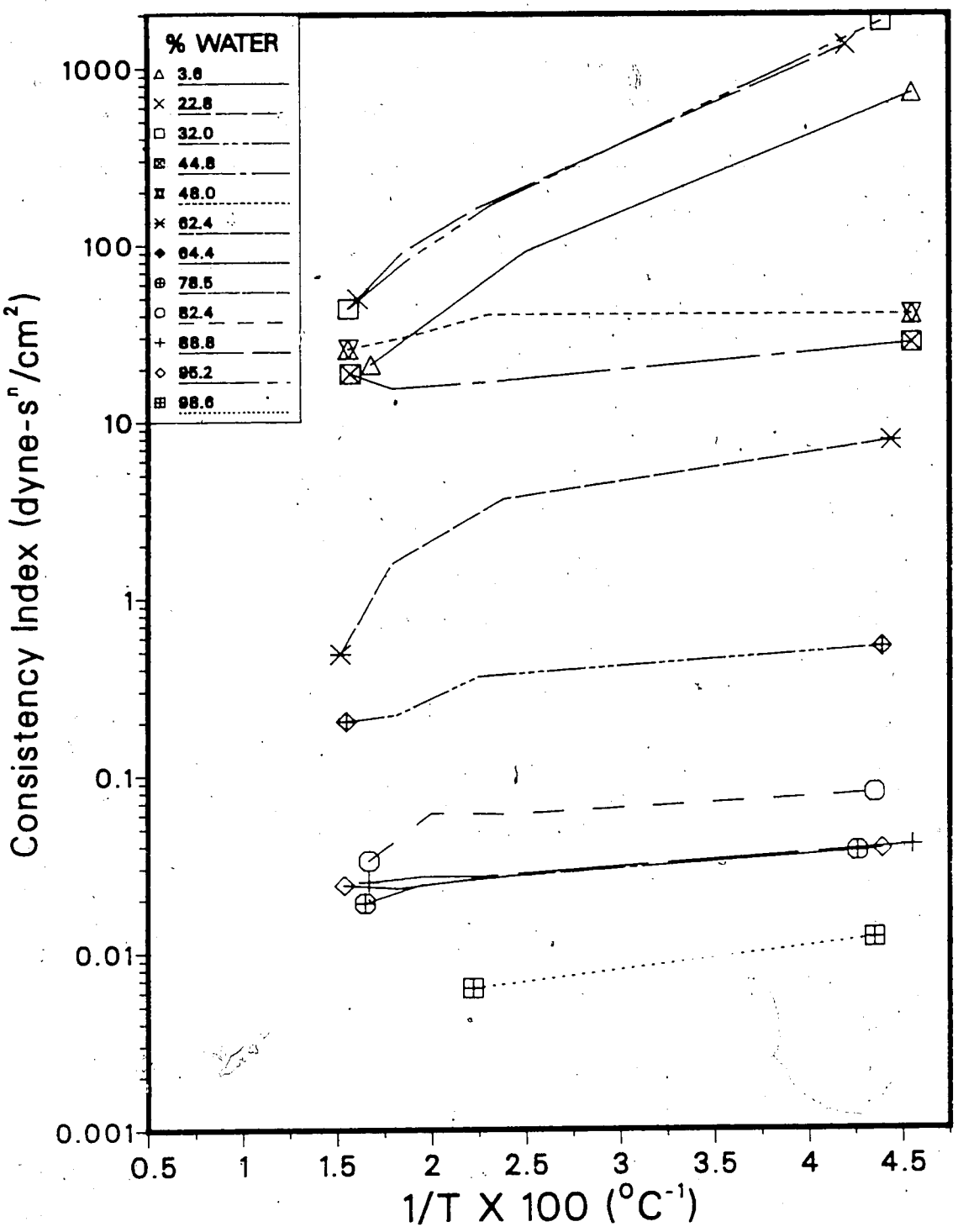

Figure 4.23. Consistency index as a function of inverse temperature and water content for Primrose emulsions.

continuous phase. The behavior of the observed consistency indices conforms to the general fact that fluid viscosity decreases with increasing temperature; but the data also imply that the consistency index is a function of the water content and hence, a function of the emulsion morphology. The simple emulsions (W/O and O/W) have viscosities similar to their respective continuous phase but modified by the hydrodynamic and non-hydrodynamic influences of the dispersed phase interactions. These observations are consistent with the findings of Griskey and Green (1968). By dimensional analysis, they found that fluids for which the shear thinning index is essentially independent of temperature, the consistency index is dependent on the viscosity of the continuous phase. These observations also apply to the water continuous dual emulsions for which the dispersed phase content is low enough: this includes the Epping and Primrose dual emulsions with at least 64.0% and 64.4% water respectively.

Griskey and Green also suggest that the consistency index will increase as the concentration of the dispersed phase increases. This is also observed, as illustrated most clearly on the contour plots. The dependence of the consistency index on the inverse of the temperature as predicted by Grisky and Green can be ascribed to the temperature sensitivity of the artificial surfactant and the consequential temperature dependence of the system morphology. However, the morphological change in the dual

emulsions has a greater effect on the shear thinning index than on the consistency index.

5. Conclusions

Based upon the examination of the morphology, particle size distribution, and rheological behavior of emulsions of Wainwright B, Epping, and Primrose dewatered crude oils, over temperatures ranging from 23°C to 79°C, the following conclusions can be drawn:

1. Each of the oils was emulsified with the nonionic surfactant Triton X-100 (0.7% by volume) and exhibited a water content dependent morphology. For low dispersed phase content, simple emulsions were produced: either W/O or O/W. For emulsions with similar water and oil contents, water continuous dual emulsions were formed.
2. The dispersed phase droplet size distribution of the simple emulsions and of the secondary particles of the dual emulsions were similar. The primary droplet size distribution of the dual emulsions was considerably broader than that for the simple emulsions.
3. Wainwright B exhibited a phase inversion concentration, whereas Epping and Primrose exhibited a region of unstable emulsions which plays the role of the phase inversion concentration.
4. As the dispersed phase content increases, the viscosity of the emulsion increases, reaching a maximum at the division between oil continuous and water continuous emulsions. Shear thinning behavior was generally observed but was more pronounced for the dual emulsions.
5. The descriptions in points 3 and 4 remain essentially

unchanged at elevated temperatures. But, the stability of the a dual emulsion appears to depend on the temperature at which it was created; if the emulsion is heated beyond this temperature, phase separation occurs.

6. The rheological behavior of the emulsions is well described by the power law model. Of the power law coefficients, the shear thinning index was observed to be dependent on temperature for dual emulsions and independent of temperature for simple emulsions. The consistency index was observed to be a function of the continuous phase viscosity and hence, temperature, and the dispersed phase concentration for all of the emulsions.
7. Dual emulsions exhibited a strong dependence on the primary particle size and evolution of morphology.

Recommendations

1. These tests should be expanded to include oils from other classifications and to consider the surfactant concentration and type as variables.
2. Data over a broader range of temperatures and at smaller temperature intervals should be obtained to permit a quantitaive correlation of the power law coefficients with temperature to be deduced.

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Appendix A

A.1 General Considerations

The measurement of the shear stress - shear rate relationship employed two coaxial cylinder viscometers: the Haake Rotovisco RV3 and the Brookfield Synchrolectric Digital viscometers. Each instrument imposes Searle flow by rotating the inner cylinder (bob) at a constant angular velocity, Ω, sustained by a torque, Ψ. The apparent viscosity, shear rate, and shear stress are determined from the dial reading, S (proportional to Ψ), the angular velocity, and manufacturer supplied equations and constants.

This proceedure is correct when the fluid is Newtonian. For non-Newtonian behavior the relationship between the shear rate, $\dot{\gamma}$, and the shear stress, τ, is non-linear. The general relation is presented as:

$$\dot{\gamma} = \dot{\gamma}(\tau) \qquad (A.1)$$

Equation A.1 must be integrated to obtain relationships among the experimental variables, and this is readily done if the form of $\dot{\gamma}(\tau)$ is known. If it is desired to obtain $\dot{\gamma}(\tau)$ from the experimental variables it is necessary to solve an integral equation (Krieger and Maron 1953). Consider then, the general problem of flow between rotating concentric cylinders.

A.2 Theory of Coaxial Cylinder Viscometers

The test fluid is contained between two coaxial cylinders which are in relative rotational motion. The inner cylinder (bob), of radius R_1 and length h, rotates at a fixed angular velocity, Ω, while the outer cylinder (cup), of radius R_2, is stationary: refer to Figure A.1. After van Wazer et al. (1963), the following assumptions are adopted:

1. stable fluid properties
2. laminar flow
3. circular flow streamlines
4. steady motion (time derivatives vanish)
5. no slip at the fluid-cylinder wall interface
6. edge and end effects are neglected
7. system is isothermal

A fluid element at a distance r from the axis of rotation flows tangentially with angular velocity $\omega(r)$. The shear rate at r is then defined as

$$\dot{\gamma} = r\frac{d\omega}{dr} \qquad (A.2)$$

in cylindrical coordinates.

The torque, Ψ, acting across the cylindrical surface of radius r is the product of the shear stress, $\tau(r)$, the moment arm, r, and the surface area, $2\pi rh$:

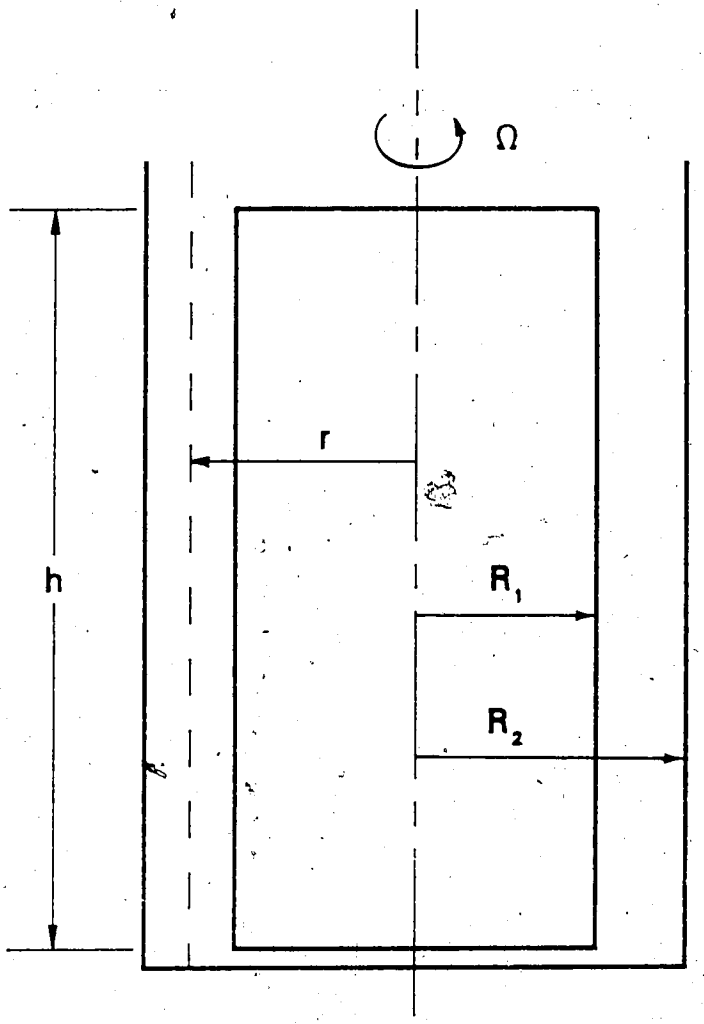

Figure A.1. Schematic of the concentric cylinder viscometer.

$$\Psi = 2\pi r^2 h\tau(r) \tag{A.3}$$

Hence, the shear stress at r is

$$\tau(r) = \frac{\Psi}{2\pi r^2 h} \tag{A.4}$$

which is independent of the fluid properties. The stress at the two boundaries, R_1, and R_2 are related as

$$\frac{\tau(R_2)}{\tau(R_1)} = \frac{R_1^2}{R_2^2} = \epsilon \tag{A.5}$$

Now, combining equations A.1 and A.2 yields

$$r\frac{d\omega}{dr} = \dot{\gamma}(\tau) \tag{A.6}$$

Differentiating equation A.4 with respect to r and substituting the result into equation A.6 obtains

$$d\omega = -\frac{\dot{\gamma}(\tau)d\tau}{2\tau} \tag{A.7}$$

Then, integrating equation A.7 across the annulus from $r=R_1$ and $\omega(R_1)=\Omega$ to $r=R_2$ and $\omega(R_2)=0$, obtains the general solution to equation A.1:

$$\Omega = \int_{\tau_1}^{\epsilon\tau_1} \frac{\dot{\gamma}(\tau)}{2\tau} d\tau \qquad (A.8)$$

In the case of Newtonian and plastic fluids (so long as the stresses in the annulus everywhere exceed the yield stress), the ratio of the shear stress to the shear rate is a constant, namely the apparent viscosity, η. For non-Newtonian fluids, the viscosity is a function of the shear rate, thus the actual rate of shear at any point in the annulus is unknown, except for a very narrow annulus. However, Whorlow (1980) indicates that a small annulus is not suitable for suspensions containing suspended particles which are of similar size as the gap. In such instances the flow is unlikely to be laminar, so the gap should be at least 100 times greater than the diameter of the particles.

Several approaches to solving equation A.8 may be pursued in the case of non-Newtonian fluids. If an empirical form of $\dot{\gamma}(\tau)$ is known, or can be surmised from previous studies of similar fluids, a solution is evident. An often used model is the Ostwald de Weale or power law model: $\tau = \xi\dot{\gamma}^n$.

When the form of $\dot{\gamma}(\tau)$ is unknown, equation A.8 , and hence $\dot{\gamma}$, may be represented as a converging infinite series. Krieger and Elrod obtained a rapidly converging series in 1953. Later, in a paper published in 1968, Krieger expressed this solution as a series of summable subseries in terms of the derivatives of the inverse of the flow behavior index:

$\kappa = 1/n$. His result was:

$$\dot{\gamma}(\tau_1) = \frac{2\kappa\Omega}{1-\epsilon^{\kappa}}\left[1 + \frac{\kappa'}{\kappa^2}f_1(t) + \frac{\kappa''}{\kappa^3}f_2(t) + \cdots\right] \quad (A.9)$$

where: $f_1(t) = t(e^t-1)^{-2}(te^t - 2e^t + t + 2)/2$

$f_2(t) = t^2(e^t-1)^{-3}(-te^{2t} + 3e^{2t} - 4te^t - t - 3)/6$

$t = -\kappa \ln\epsilon$

$\kappa = d\ln\Omega/d\ln\tau_1$

$\kappa' = d\kappa/d\ln\tau_1$

$\kappa'' = d^2\kappa/d(\ln\tau_1)^2$

$\tau_1 = \dfrac{\Psi}{2\pi h R_i^2}$

Note too, that the shear stress at the surface of the inner cylinder, τ_1, is related to the viscometer dial reading, S, through Ψ: Ψ = S x full scale torque/100, where S is a dial reading between 0 and 100.

If the equation for the power law model is re-arranged as $\dot{\gamma} = (\tau/\xi)^{1/n}$, the integral in equation A.8 is readily solved; the result is exactly the first term of equation A.9 with $\kappa = 1/n$. κ is usually called the shear thinning index, and may assume any value greater than zero with the following interpretations:

$$\kappa = \begin{cases} 0\text{-}1 \Rightarrow \text{Dilatancy (shear thickening)} \\ .1 \Rightarrow \text{Newtonian behavior} \\ 1\text{-}\infty \Rightarrow \text{Pseudoplacticity (shear thinning)} \end{cases}$$

Clearly then, equation A.9 is simply the power law model with correction terms. When κ is constant (ie. when a log-log plot of Ω versus τ, the experimental data, has constant slope), the power law alone may be used. When κ varies, equation A.9 should be used, but in a practical truncated form. In this study, the shear rate at the surface of the inner cylinder was obtained using the first two terms of equation A.9.

For viscometers with a wide annulus, that is when R_2 tends to infinity, the function f(t) tends to zero, and equation A.9 degenerates to the power law model. In practice wide annulus viscometers, such as the Brookfield Synchrolectric with the LVTD spindles, are only an approximation to an infinite sea of fluid. Again, several terms of equation A.9 may need consideration. Finally, note that if κ is set equal to one, the resulting expressions for the shear rate and viscosity are precisely those recommended by the Haake and Brookfield viscometer manufacturers.

A.3 Violation of the Assumptions

In a real viscometer, several of the idealizing assumptions listed earlier may not hold, as a result of factors such as the angular speed of the bob, the physical interaction of the fluid with the cylinder wall, and the fluid properties. Such departures have been discussed extensively in the literature and some of these potential violations are discussed below.

A.3.1 Fluid Properties

The reaction of the test fluid in the viscometer, of course, depends upon the experimental conditions imposed. However, it also depends upon factors which are difficult to control or even describe adequately (for example, inhomogeneity and previous history).

For suspensions and emulsions, the fluid is clearly inhomogeneous, and concentration gradients may be established in the rotational viscometer. The phase with the higher density will tend to migrate away from the axis of rotation. Segré and Silverberg (1961, 1962) examined this phenomena in poiseuille flow. The establishment of concentration gradients can give rise to slip at the inner (rotating) cylinder. However, the shear rate is more uniform in Couette flow, so inertial effects may be relatively more important in Poiseuille than in Couette viscometers. A crucial test for particle migration is to compare data for the same fluid using different cylinder radius ratios: Harris (1977) states the data must coincide. Porter and Johnson (1959) indicate that at sufficiently high rates of shear the material can be irreversibly degraded by such mechanical agitation.

In the theoretical development of the previous section, it was observed that the expression for the stress is independent of the fluid properties. Thus, if the fluid suffers irreversible degradation, the fluid rheology is history dependent and the stress is no longer independent of

material properties. Whorlow (1980) suggests that it is desirable to use the narrowest possible annulus in such cases. This both minimizes the uncertainty in the value of the shear stress in the gap and minimizes the difference in shear history during the test. For all non-homogeneous fluids, only the average response of the fluid at the time of measurement is obtained since any gap has finite dimensions: material in different parts of the gap will have been sheared by different stresses.

The stability of emulsions especially depends upon physical and chemical forces acting at the molecular level, and some of these are temperature dependent. Consequently, attempts to measure the rheological influence of temperature may be terminated by excessive heating. Above a certain temperature, irreversible phase separation may occur; this change in itself is interesting, but rheological measurements would be meaningless.

A.3.2 Laminar Flow and Circular Streamlines

Departure from circular streamlines and the subsequent disruption of laminar flow arises from inertial forces and therefore, can even occur in Newtonian fluids. It occurs irrespective of whether the bob or the cup rotates. When the bob rotates, the nearby fast moving fluid attempts to move outwards; since the whole layer cannot move out uniformly, it breaks into cells (Taylor Vortices) and circulates. According to Taylor (1923), when the inner cylinder rotates,

secondary motions occur above a critical transition Reynolds number,

$$Re_t = 41.3[R_2/(R_2 - R_1)]^{0.5} \qquad (A.10)$$

for Newtonian fluids the Reynolds number is:

$$Re = \Omega R_1(R_2-R_1)\rho/\eta \qquad (A.11)$$

where ρ is the fluid density. When the rotational speed of the bob is sufficient that the critical Reynolds number is surpassed, the flow is still laminar, but variable. An interesting discussion of this time varying steady flow is given by Feynman et al. (1966). As the relative velocity of the cylinders is increased further, complete turbulence eventually sets in.

Defining a Reynolds number for an inhomogeneous fluid such as an emulsion is difficult; Whorlow (1980) suggests that it is not practical to estimate the extent of secondary flow, or the magnitude of error produced in viscosity measurements. To do so, it would be necessary to establish the form of the constitutive equation for the material. Van Wazer et al. (1963), indicates that the onset of turbulence is indicated by curvature of the stress-strain curve, and that this behavior must be distinguished from dilatancy.

A.3.3 Time-Dependent Effects

When the bob is set to rotate at a particular angular velocity, an infinite (in principle) amount of time is required to establish steady flow within the fluid. Coleman et al. (1966) finds that such a time effect occurs because the flows achieved are described only approximately by equations such as those described above.

Until flow equilibrium is attained, the stress will appear to decline over time, at constant shear rate. This behavior must be distinguished from both reversible thixotropy and irreversible thixotropy.

A.3.4 Wall Adherence Condition

It is usual to assume that the fluid adjacent to the metal surface of the cylinders moves with the velocity of that surface. However, slippage may occur in several ways. True slippage occurs for rarefied gases and viscoelastic fluids (Coleman et al. 1966). Apparent slippage will occur if there is a local reduction in the concentration of the suspended particles, as discussed above, and may also occur if the metal surface affects the molecular structure of the fluid in contact with the surface (Whorlow 1980).

A.3.5 Edge and End Effects

Since the cylinders are of finite length, the torque will vary along the length of the rotating cylinder. It is less near the ends of the bob because the direction of the

maximum velocity gradient is no longer normal to the side of the cylinder. This effect is not accommodated by equation A.4, but may be corrected by letting the length, h, represent not the physical length of the cylinder, but rather the effective length of the cylinder. Rosen (1971, 1972) outlines a procedure for determining the combined edge and end effects, which are accommodated in the effective length. It is presented for use with the Brookfield viscometer LVTD spindles but is also applicable to the UL Adapter and to the Haake viscometer.

Walters (1975) explained that edge and end effects are expected to be especially important in wide gap viscometers. By using a narrow annulus viscometer, the region influenced by such effects is minimized. When a wide gap viscometer is employed, the procedure of Rosen for accommodating these effects is adequate.

A.3.6 Viscous Heating

Heating due to the dissipation of work as heat when a liquid is sheared is troublesome, especially when the viscosity is high, when high rates of shear occur, or when the shearing flow is maintained for long periods of time. The significance of this source of error depends most importantly on the temperature dependence of the material properties of the liquid (Whorlow 1980), but for suspensions, much of the viscous resistance is due to the mechanical interactions between particles. Hence, the

dependence on temperature may be primarily governed by the properties of the suspending fluid.

The amount of temperature rise depends on the temperature of the cylinders, the geometry, the shear rate, and the thermal conductivity of the fluid. For both the Haake Rotovisco and Brookfield Synchrolectric viscometers, the outer cylinder is in contact with the constant temperature (control) fluid, while the inner cylinder is thermally insulated by the test fluid. (Depending on the thermal conductivity of the test fluid, considerable time may be required for the inner cylinder to approach the temperature of the outer cylinder.) Whorlow (1980) demonstrated that for a small annulus and for a low viscosity fluid the temperature distribution in the fluid is parabolic; the location of the maximum temperature is a function of the square of the gap size, the shear rate, the shear stress and the thermal conductivity of the fluid.

Since fluid viscosity is sensitive to temperature, it is important to maintain a uniform temperature throughout the test fluid. This is most easily aproximated by using the narrowest gap possible and by obtaining the dial reading as soon as possible after switching on the viscometer (but long enough for the velocity field to be fully developed).

A.4 The Haake and Brookfield Viscometers

The use of the Haake and Brookfield viscometers is relatively simple, and provide reproducible results if used properly. The following comments apply to both viscometers unless otherwise specified.

1. When the bob is immersed in the fluid, one must ensure that no air bubbles are trapped under the cylinder, and that the sample is free of entrained air before testing.
2. The axes of the cup and bob must be coincident. This is important only for the Brookfield LVTD spindles: When the spindle is immersed into the fluid (up to the immersion mark on the spindle) ensure the spindle is centered within the cup (preferably a 600 mL beaker). Fortunately, the comparably infinite size of the cup is somewhat forgiving of slight misalignments.
3. For a mathematical treatment of the data, the guard leg, provided for use with the Brookfield LVTD spindles, is necessarily omitted.
4. The angular velocity of the bob in the Haake viscometer is not properly set by the RV3 control unit. The relationship between the speed requested n_s and the actual or true speed, n_t was measured. The relationship is different if the 0.1 multiplier is used. For the primary scale, (including manual setting) the relationship is

$$n_t = 1.7488 n_s^{1.0132} \qquad (A.12)$$

with a standard deviation about the regression line of 0.0122. When the 0.1 multiplier is employed, the following equation applies :

$$n_t = 1.8431(n_s)1.0016^{n_s} \qquad (A.13)$$

with a standard deviation about the regression line of 0.0285

Since the Haake Rotovisco RV3 is a wide-range instrument, it is not able to perform well at the extremes of its range. In this work, the values of n_s used were in the range $0.283 \leq n_s \leq 724$; over this range an appropriate relationship is

$$n_t = 1.7777n_s^{1.0081} \qquad (A.14)$$

This equation may be used with or without the 0.1 multiplier and has a standard deviation about the regression line of 0.0229.

The dimensions of n_s and n_t are revolutions per minute; the usual dimension of Ω is s^{-1}, hence it is related to n_t as $\Omega = 2\pi n_t/60$.

5. For both viscometers, begin the test at low values of n_s such that the dial reading , S, does not exceed 100. In fact, at no time should the dial reading exceed 100 since the torsion spring may be damaged; this is

particularly important for the Haake viscometer.

6. Particular care must be taken when handling the cup and bob assembly of the Haake viscometer. The bob axle is centered by saphire bearings which are very easily damaged or broken. Damage is most likely to occur when the cup and bob assembly is lowered into the thermally jacketed vessel containing the test fluid: the assembly must be lowered onto its seat gently, never harshly.

Appendix B

Rheological Data
for Emulsions of Wainwright B, Epping, and Primrose
Dewatered Crude Oils

Table B.1 Wainwright B 0.8% (dried) W/O Emulsion Rheology

Haake Rotovisco RV3
Temperature: 22.80 ±0.10°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
6.90	±0.15	58.82	±3.53	852.7	±54.4
7.80	0.17	69.41	3.53	889.5	49.1
9.67	0.22	77.65	3.53	803.4	40.7
10.85	0.14	96.47	3.53	889.2	34.6
13.75	0.13	116.47	3.53	847.0	27.0
15.64	0.19	134.12	5.88	857.5	39.0
19.63	0.23	157.65	3.53	803.0	20.4
22.19	0.25	181.18	3.53	816.5	18.4
27.74	0.33	214.12	3.53	772.0	15.7
31.19	0.30	248.24	3.53	795.9	13.7
39.01	0.38	304.71	3.53	781.1	11.9
44.35	0.47	354.12	3.54	798.5	11.6
55.62	0.57	428.24	3.54	769.9	10.2
62.75	0.61	492.95	3.54	785.6	9.5
78.65	0.75	608.25	3.55	773.3	8.6
89.22	0.86	691.78	3.55	775.4	8.5
112.00	1.09	852.96	3.57	761.5	8.1
126.96	1.25	954.13	3.58	751.5	7.9
158.81	1.59	1169.43	3.60	736.4	7.7

Table B.2 Wainwright B 0.8% (dried) W/O Emulsion Rheology

Haake Rotovisco RV3
Temperature: 40.50 ±0.05°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
19.68	±0.17	52.94	±3.53	269.0	±18.1
22.28	0.19	58.82	5.88	264.1	26.5
28.34	0.58	70.59	3.53	249.1	13.5
31.19	0.55	72.94	5.88	233.9	19.3
38.78	0.40	96.47	3.53	248.8	9.5
44.56	0.41	107.06	5.88	240.3	13.4
55.81	0.52	131.77	3.53	236.1	6.7
63.15	0.60	145.88	5.88	231.0	9.6
78.66	0.75	180.00	3.53	228.8	5.0
89.68	0.92	204.71	3.53	228.3	4.6
112.15	1.21	245.89	3.53	219.2	3.9
126.32	1.27	281.18	3.53	222.6	3.6
158.53	1.59	347.06	3.54	218.9	3.1
179.25	1.84	389.42	3.54	217.2	3.0
223.78	2.34	488.24	3.54	218.2	2.8
254.18	2.74	558.83	3.55	219.9	2.8
319.22	3.42	688.25	3.55	215.6	2.6
453.10	5.04	954.13	5.91	210.6	2.7
515.04	5.90	1063.55	5.92	206.5	2.6
568.78	6.57	1164.73	5.92	204.8	2.6

Table B.3 Wainwright B 0.8% (dried) W/O Emulsion Rheology

Haake Rotovisco RV3
Temperature: 60.00 ±0.05°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
111.70	±1.76	90.59	±2.35	81.1	±2.5
126.49	2.01	95.30	2.35	75.3	2.2
157.59	1.85	123.53	2.35	78,4	1.8
179.42	2.06	135.30	2.35	75.4	1.6
223.89	2.36	171.77	2.36	76.7	1.3
253.57	2.70	192.94	2.36	76.1	1.2
317.41	3.42	244.71	2.36	77.1	1.1
451.89	5.07	348.24	3.54	77.1	1.2
639.93	7.50	478.83	3.54	74.8	1.0
906.62	10.87	691.78	5.90	76.3	1.1
1285.60	15.93	964.72	11.78	75.0	1.3

Table B.4 Wainwright B 0.8% (dried) W/O Emulsion Rheology

Haake Rotovisco RV3
Temperature: 79.15 ±0.05°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
176.83	±1.81	48.24	±5.88	27.3	±3.3
221.43	2.32	64.12	2.35	29.0	1.1
249.76	2.66	75.30	2.35	30.1	1.0
314.36	3.54	104.12	2.35	33.1	0.8
448.50	5.00	154.12	5.88	34.4	1.4
639.72	7.61	224.71	2.36	35.1	0.6
905.81	11.31	307.06	2.36	33.9	0.5
1282.78	16.19	456.48	5.89	35.6	0.6
1845.44	25.81	635.31	5.89	34.4	0.6
2616.87	37.62	810.60	5.90	31.0	0.5

Table B.5 Wainwright B 4.8% W/O Emulsion Rheology

Haake Rotovisco RV3
Temperature: 22.65 ±0.05°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
9.57	±0.08	72.94	±1.18	762.3	±13.8
10.83	0.09	84.71	1.18	782.1	12.7
13.58	0.12	111.41	2.00	820.6	16.3
15.45	0.13	127.88	2.35	827.8	16.8
19.34	0.17	161.53	2.00	835.3	12.8
21.94	0.21	188.59	1.18	859.5	9.8
27.47	0.26	233.77	1.18	850.9	9.2
31.14	0.31	273.30	2.01	877.7	10.8
39.02	0.37	336.48	1.19	862.4	8.8
44.14	0.41	389.42	1.20	882.3	8.7
55.23	0.53	487.07	1.21	881.9	8.7
62.60	0.62	565.89	1.22	903.9	9.1
78.43	0.76	702.37	1.25	895.5	8.8
89.00	0.88	808.25	1.27	908.2	9.1
111.59	1.10	1000.02	1.32	896.2	8.9
126.02	1.27	1140.02	1.36	904.6	9.2
128.83	1.30	1160.02	5.92	900.4	10.2

Table B.6 Wainwright B 4.8% W/O Emulsion Rheology

Haake Rotovisco RV3
Temperature: 39.95 ±0.05°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
38.57	±0.35	85.77	±0.24	222.4	±2.1
43.73	0.40	101.18	0.59	231.4	2.5
54.94	0.52	133.77	0.36	243.5	2.4
62.53	0.58	152.12	0.36	243.3	2.3
78.29	0.75	193.77	0.72	247.5	2.5
88.80	0.86	219.18	0.38	246.8	2.4
111.16	1.09	278.83	0.39	250.8	2.5
126.27	1.24	316.01	0.40	250.3	2.5
157.48	1.63	394.12	2.01	250.3	2.9
178.37	1.85	456.48	1.21	255.9	2.7
224.21	2.34	574.13	1.23	256.1	2.7
253.99	2.68	645.89	1.24	254.3	2.7
317.66	3.41	810.60	1.27	255.2	2.8
450.55	5.00	1155.31	1.36	256.4	2.9

Table B.7 Wainwright B 4.8% W/O Emulsion Rheology

Haake Rotovisco RV3
Temperature: 59.90 ±0.05°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
77.68	±0.74	55.06	±0.24	70.9	±0.7
88.08	0.85	64.82	0.36	73.6	0.8
110.67	1.10	84.71	0.24	76.5	0.8
125.10	1.27	96.35	0.24	77.0	0.8
156.44	1.61	127.41	1.18	81.4	1.1
178.32	1.82	145.53	1.18	81.6	1.1
223.49	2.33	185.53	1.18	83.0	1.0
253.04	2.68	210.24	1.18	83.1	1.0
317.67	3.51	268.24	1.19	84.4	1.0
387.35	4.34	321.54	5.89	83.0	1.8
447.73	5.05	378.48	2.01	84.5	1.1
526.49	6.14	458.83	5.89	87.1	1.5
638.74	7.35	554.13	2.38	86.8	1.1
759.57	8.88	663.54	5.90	87.4	1.3
906.92	10.78	791.78	3.56	87.3	1.1
1120.67	13.70	974.14	5.91	86.9	1.2
1299.57	16.36	1103.55	3.59	84.9	1.1
1415.41	17.96	1176.49	5.92	83.1	1.1

Table B.8 Wainwright B 4.8% W/O Emulsion Rheology

Haake Rotovisco RV3
Temperature: 79.45 ±0.05°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
156.21	±1.65	49.06	±0.59	31.4	±0.5
177.13	1.89	58.71	0.59	33.1	0.5
222.72	2.32	75.65	0.47	34.0	0.4
251.74	2.66	87.06	0.59	34.6	0.4
315.99	3.47	113.77	0.83	36.0	0.5
384.29	4.40	139.18	5.88	36.2	1.6
446.93	5.11	169.41	2.00	37.9	0.6
526.79	5.95	201.18	5.88	38.2	1.2
636.54	7.32	247.06	1.19	38.8	0.5
758.08	8.88	298.01	5.89	39.3	0.9
904.13	10.76	357.65	3.54	39.6	0.6
1112.41	13.53	447.07	5.89	40.2	0.7
1286.02	17.47	523.54	3.54	40.7	0.6
1432.09	18.71	565.89	5.89	39.5	0.7
1599.27	20.20	635.31	11.77	39.7	0.9
1839.37	26.55	729.42	11.77	39.7	0.9
2240.58	28.75	835.31	11.78	37.3	0.7
2641.16	34.42	941.19	11.78	35.6	0.6

Table B.9 Wainwright B 10.4% W/O Emulsion Rheology

Haake Rotovisco RV3
Temperature: 22.85 ±0.05°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
9.63	±0.09	91.77	±3.53	953.4	±37.8
10.89	0.10	108.24	3.53	993.5	33.8
13.66	0.13	134.12	1.18	981.7	12.5
15.68	0.26	156.47	2.35	997.9	22.6
19.41	0.37	178.83	2.36	921.2	21.4
21.85	0.30	221.18	2.36	1012.1	17.8
27.61	0.32	264.71	2.36	958.8	14.1
31.27	0.37	310.59	2.36	993.2	14.0
39.00	0.50	370.59	2.36	950.1	13.6
44.15	0.52	442.36	2.37	1002.0	13.1
55.48	0.61	535.30	2.37	964.9	11.4
62.71	0.66	624.72	1.23	996.2	10.7
78.48	0.83	763.54	2.40	972.9	10.7
89.05	0.96	889.43	1.29	998.8	10.9
111.91	1.17	1083.55	3.59	968.2	10.6
118.66	1.17	1176.49	5.92	991.5	11.0
138.55	1.38	1403.55	5.94	1013.0	11.0

Table B.10 Wainwright B 10.4% W/O Emulsion Rheology

Haake Rotovisco RV3
Temperature: 40.40 ±0.05°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
27.27	±0.45	81.18	±2.35	297.7	±9.9
30.88	0.51	83.53	1.18	270.5	5.9
38.54	0.48	117.65	2.35	305.3	7.2
44.44	0.53	127.06	1.18	285.9	4.3
55.45	0.54	161.18	1.18	290.7	3.5
62.83	0.62	178.83	1.18	284.6	3.4
78.31	0.74	225.89	2.36	288.5	4.1
89.36	0.89	257.65	1.19	288.3	3.2
111.72	1.17	314.12	1.19	281.2	3.1
126.05	1.27	361.18	1.20	286.5	3.0
157.92	1.59	449.42	2.37	284.6	3.2
180.28	1.96	511.77	1.22	283.9	3.2
224.35	2.86	615.30	1.23	274.3	3.5
251.31	2.72	723.54	2.39	287.9	3.3
279.88	3.00	807.07	5.90	288.4	3.7
317.78	3.43	917.66	2.42	288.8	3.2
347.50	4.27	1011.78	5.91	291.2	4.0
384.29	4.76	1176.49	11.79	306.1	4.9

Table B.11 Wainwright B 10.4% W/O Emulsion Rheology

Haake Rotovisco RV3
Temperature: 59.05 ±0.05°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
77.69	±1.21	74.71	±0.59	96.2	±1.7
88.09	1.38	95.30	1.18	108.2	2.2
111.99	1.38	113.41	0.59	101.3	1.4
125.52	1.26	131.77	2.35	105.0	2.2
157.78	1.63	167.06	1.18	105.9	1.3
179.71	1.83	187.06	1.18	104.1	1.2
224.46	2.35	231.77	1.18	103.3	1.2
255.14	2.78	263.53	1.19	103.3	1.2
316.39	3.97	320.01	5.89	101.1	2.3
384.60	5.02	415.30	5.89	108.0	2.1
454.69	5.28	468.24	5.89	103.0	1.8
529.35	6.01	544.72	5.89	102.9	1.6
637.04	7.37	661.19	5.90	103.8	1.5
758.53	9.01	802.37	5.90	105.8	1.5
912.35	11.03	952.96	5.91	104.5	1.4
1167.68	14.44	1176.49	5.92	100.8	3

Table B.12 Wainwright B 10.4% W/O Emulsion Rheology

Haake Rotovisco RV3
Temperature: 79.65 ±0.05°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
223.09	±2.54	92.35	±0.59	41.4	±0.5
252.62	2.91	102.35	2.35	40.5	1.0
315.92	3.44	134.12	2.35	42.5	0.9
449.65	5.03	195.30	2.36	43.4	0.7
526.68	6.12	228.24	5.88	43.3	1.2
635.20	7.35	284.71	3.53	44.8	0.8
758.18	8.88	343.54	0.62	45.3	0.5
904.43	10.76	411.77	5.89	45.5	0.8
1116.09	13.64	514.13	5.89	46.1	0.8
1295.84	16.39	588.25	11.77	45.4	1.1
1523.03	19.43	670.60	11.77	44.0	1.0
1854.73	30.86	800.01	11.77	43.1	1.0
2235.27	34.35	882.37	11.78	39.5	0.8
2656.67	41.29	1011.78	11.78	38.1	0.7

Table B.13 Wainwright B 18.0% W/O Emulsion Rheology

Haake Rotovisco RV3
Temperature: 23.10 ±0.05°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
6.76	±0.06	65.30	±0.59	965.4	±12.0
7.65	0.07	76.47	1.18	999.6	17.6
9.60	0.08	97.65	1.18	1017.5	15.1
10.90	0.10	114.47	0.83	1050.0	12.4
13.70	0.12	142.00	0.83	1036.4	10.7
15.49	0.13	162.36	1.18	1047.8	11.8
19.50	0.17	202.00	0.83	1036.2	9.8
21.88	0.20	226.71	0.38	1036.4	9.7
27.55	0.39	296.48	1.19	1076.0	15.8
31.21	0.44	314.12	1.19	1006.3	14.8
38.87	0.39	409.42	1.20	1053.3	11.1
44.28	0.43	454.13	1.21	1025.5	10.3
54.87	0.56	576.48	1.23	1050.6	11.0
62.77	0.99	695.31	1.25	1107.6	17.6
79.35	1.03	811.78	1.27	1023.1	13.4
89.48	0.98	934.13	1.30	1043.9	11.5
112.05	1.25	1121.20	1.35	1000.6	11.2

Table B.14 Wainwright B 18.0% W/O Emulsion Rheology

Haake Rotovisco RV3
Temperature: 40.10 ±0.05°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
19.26	±0.19	49.41	±1.18	256.6	±6.6
21.80	0.21	59.41	0.59	272.6	3.8
27.55	0.25	75.30	0.59	273.3	3.3
31.16	0.29	84.00	0.59	269.5	3.1
39.08	0.41	107.06	0.24	274.0	2.9
43.83	0.50	117.30	0.25	267.6	3.1
54.92	0.67	160.36	0.37	292.0	3.6
62.86	0.74	173.77	0.37	276.4	3.3
78.26	0.76	222.36	0.38	284.1	2.8
88.86	0.86	250.59	0.38	282.0	2.8
110.85	1.10	318.48	0.40	287.3	2.9
126.18	1.35	369.42	0.42	292.8	3.1
158.13	1.65	452.95	1.21	286.4	3.1
178.94	1.85	520.01	1.22	290.6	3.1
224.59	2.33	645.89	1.24	287.6	3.0
254.33	2.67	729.42	1.25	286.8	3.1
317.34	3.56	905.90	1.29	285.5	3.2
352.10	4.38	1023.55	5.91	290.7	4.0
416.04	5.24	1176.49	5.92	282.8	3.8

Table B.15 Wainwright B 18.0% W/O Emulsion Rheology

Haake Rotovisco RV3
Temperature: 59.70 ±0.05°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
62.37	±0.58	52.94	±1.18	84.9	±2.0
78.02	0.74	68.24	1.18	87.5	1.7
88.59	0.85	78.24	0.59	88.3	1.1
111.13	1.10	100.00	0.59	90.0	1.0
125.49	1.28	112.83	0.36	89.9	1.0
156.72	1.59	146.71	0.83	93.6	1.1
178.74	1.83	168.24	0.37	94.1	1.0
224.14	2.33	210.59	0.83	94.0	1.0
254.51	2.69	238.83	0.38	93.8	1.0
319.66	3.43	294.48	0.84	92.1	1.0
386.09	4.69	350.59	5.89	90.8	1.9
448.77	5.34	423.54	1.20	94.4	1.2
528.50	6.09	491.77	5.89	93.1	1.5
636.16	7.32	603.54	2.38	94.9	1.2
757.72	8.91	731.78	5.90	96.6	1.4
906.44	10.79	876.49	2.41	96.7	1.2
1067.66	12.97	1025.90	5.91	96.1	1.3
1243.56	15.33	1176.49	5.92	94.6	1.3

Table B.16 Wainwright B 18.0% W/O Emulsion Rheology

Haake Rotovisco RV3
Temperature: 79.20 ±0.05°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
157.16	±1.61	59.41	±0.35	37.8	±0.4
178.20	1.85	67.18	0.24	37.7	0.4
223.13	2.36	86.71	0.24	38.9	0.4
252.39	2.72	98.00	0.24	38.8	0.4
315.74	3.41	127.41	1.18	40.4	0.6
385.10	4.22	158.00	5.88	41.0	1.6
449.54	5.02	186.71	1.18	41.5	0.5
526.64	6.02	219.65	5.88	41.7	1.2
636.45	7.40	272.59	2.36	42.8	0.6
756.58	8.98	325.54	5.89	43.0	0.9
901.49	10.80	400.01	5.89	44.4	0.8
1111.75	13.57	500.01	11.77	45.0	1.2
1280.40	16.18	588.25	11.77	45.9	1.1
1438.35	19.83	647.07	11.77	45.0	1.0
1605.30	23.21	705.89	11.77	44.0	1.0
1835.76	27.54	817.66	8.25	44.5	0.8
2208.32	33.54	935.31	11.78	42.4	0.8

Table B.17 Wainwright B 26.5% W/O Emulsion Rheology

Haake Rotovisco RV3
Temperature: 22.80 ±0.15°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
3.37	±0.03	58.24	±0.24	1728.3	±15.7
4.76	0.04	85.88	0.13	1802.6	14.9
6.80	0.06	125.53	2.00	1845.9	33.4
7.71	0.07	139.18	2.00	1805.4	30.4
9.67	0.09	176.83	1.42	1828.4	21.8
11.03	0.09	196.12	1.18	1778.5	18.3
13.78	0.12	240.00	1.19	1741.9	16.9
15.57	0.13	269.42	2.01	1730.4	19.4
19.53	0.17	331.77	1.19	1698.8	15.7
22.03	0.19	372.95	1.20	1693.2	15.6
27.70	0.28	467.07	1.21	1686.3	17.4
31.28	0.32	510.60	1.22	1632.4	17.4
38.69	0.38	647.07	1.24	1672.6	16.7
44.19	0.56	774.13	1.26	1752.0	22.4
55.87	0.56	928.25	1.30	1661.3	16.7
62.65	0.58	1052.96	1.33	1680.6	15.8
69.48	0.67	1170.61	1.37	1684.8	16.4
78.59	0.77	1311.79	1.41	1669.2	16.4

Table B.18 Wainwright B 26.5% W/O Emulsion Rheology

Haake Rotovisco RV3
Temperature: 39.95 ±0.05°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
13.74	±0.15	62.94	±0.59	458.2	±6.5
15.54	0.17	68.24	0.59	439.2	6.1
19.42	0.17	87.06	0.59	448.2	5.0
22.18	0.19	97.06	0.59	437.6	4.6
27.54	0.29	118.24	0.59	429.4	5.0
30.94	0.28	138.47	1.18	447.5	5.5
38.77	0.35	178.00	0.83	459.1	4.6
43.99	0.40	205.89	1.18	468.0	5.0
55.21	0.51	263.53	0.84	477.3	4.7
62.78	0.58	298.83	1.19	476.0	4.8
78.30	0.77	372.59	0.85	475.9	4.8
88.78	0.88	431.77	1.20	486.3	5.0
111.42	1.09	538.83	1.22	483.6	4.9
126.23	1.25	614.13	1.23	486.5	4.9
157.76	1.61	763.54	1.26	484.0	5.0
179.46	1.92	876.49	1.29	488.4	5.3
225.24	2.37	1070.61	2.44	475.3	5.1
255.05	2.72	1211.79	11.79	475.1	6.9

Table B.19 Wainwright B 26.5% W/O Emulsion Rheology

Haake Rotovisco RV3
Temperature: 59.00 ±0.05°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
39.08	±0.40	61.30	±0.24	156.8	±1.7
44.31	0.45	67.41	0.24	152.1	1.6
55.28	0.51	85.77	0.36	155.2	1.6
62.34	0.60	97.06	0.59	155.7	1.8
77.90	0.75	126.71	1.18	162.7	2.2
88.77	0.85	145.06	1.18	163.4	2.1
111.22	1.08	183.18	1.18	164.7	1.9
125.85	1.24	208.59	1.18	165.8	1.9
157.98	1.68	264.36	1.19	167.3	1.9
180.13	1.86	293.30	1.19	162.8	1.8
224.40	2.38	362.01	1.20	161.3	1.8
253.28	2.67	414.13	1.20	163.5	1.8
318.39	3.47	521.19	2.37	163.7	1.9
385.40	4.69	623.54	5.89	161.8	2.5
448.39	5.47	758.84	2.40	169.2	2.1
527.45	6.24	878.84	5.91	166.6	2.3
635.57	7.42	1094.14	3.59	172.1	2.1
685.15	8.06	1176.49	5.92	171.7	2.2

Table B.20 Wainwright B 26.5% W/O Emulsion Rheology

Haake Rotovisco RV3
Temperature: 79.15 ±0.05°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
88.56	±0.86	58.47	±0.35	66.0	±0.8
110.90	1.09	74.24	0.24	66.9	0.7
126.01	1.30	85.88	0.24	68.2	0.7
157.02	1.78	106.47	0.36	67.8	0.8
177.50	1.91	126.71	0.83	71.4	0.9
223.02	2.34	161.18	0.37	72.3	0.8
251.92	2.66	186.24	1.18	73.9	0.9
318.84	4.45	241.18	2.01	75.6	1.2
388.77	5.97	274.95	5.88	70.7	1.9
448.58	5.23	331.42	1.19	73.9	0.9
526.99	6.10	387.07	5.89	73.4	1.4
636.04	7.38	481.18	2.37	75.7	1.0
757.54	8.88	576.48	5.89	76.1	1.2
905.04	10.90	700.01	4.72	77.3	1.1
1117.69	13.58	858.84	5.90	76.8	1.1
1291.45	17.36	992.96	5.91	76.9	1.1
1434.61	19.43	1070.61	11.78	74.6	1.3
1579.28	21.55	1176.49	11.79	74.5	1.3

Table B.21 Wainwright B 28.0% W/O/W Emulsion Rheology

Haake Rotovisco RV3
Temperature: 24.70 ±0.05°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
10.29	±0.08	56.00	±0.59	544.4	±7.1
11.64	0.09	59.41	0.59	510.3	6.5
14.72	0.18	66.12	0.36	449.1	5.9
16.18	0.25	69.06	0.24	426.8	6.9
20.18	0.21	80.00	0.24	396.5	4.3
23.29	0.19	85.06	0.36	365.2	3.4
29.27	0.26	95.18	0.24	325.1	3.0
32.93	0.33	100.59	0.36	305.4	3.2
40.47	0.48	113.53	0.36	280.6	3.5
45.41	0.42	124.71	0.36	274.7	2.7
56.90	0.53	144.71	0.36	254.3	2.4
64.66	0.64	158.47	0.37	245.1	2.5
81.03	0.78	182.00	0.37	224.6	2.2
91.37	0.86	198.47	0.37	217.2	2.1
114.35	1.10	231.42	0.38	202.4	2.0
128.93	1.26	252.59	0.38	195.9	1.9
161.03	1.60	298.01	0.40	185.1	1.9
183.64	1.91	327.42	0.40	178.3	1.9
228.90	2.70	380.01	0.85	166.0	2.0
257.28	2.75	423.54	1.20	164.6	1.8
326.11	4.17	504.71	1.21	154.8	2.0
397.13	5.57	564.72	5.89	142.2	2.5
458.91	5.37	641.19	1.24	139.7	1.7
540.53	6.13	716.48	5.90	132.6	1.9
651.47	7.44	825.90	3.56	126.8	1.5
771.00	9.18	941.19	5.91	122.1	1.6
918.82	11.22	1094.14	5.92	119.1	1.6
1016.55	12.53	1176.49	5.92	115.7	1.5

Table B.22 Wainwright B 28.0% W/O/W Emulsion Rheology

Haake Rotovisco RV3
Temperature: 40.90 ±0.30°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
38.89	±0.35	64.71	±0.59	166.4	±2.1
44.10	0.40	74.12	0.59	168.1	2.0
55.00	0.53	94.12	0.36	171.1	1.8
62.38	0.63	111.18	0.36	178.2	1.9
79.00	0.91	139.18	0.83	176.2	2.3
89.77	1.02	150.94	0.36	168.1	2.0
111.60	1.09	187.42	0.83	167.9	1.8
126.52	1.25	212.59	0.38	168.0	1.7
157.00	1.85	262.00	0.39	166.9	2.0
162.83	8.19	313.77	2.01	192.7	9.8
201.40	6.47	223.53	3.88	111.0	4.1
278.58	7.50	238.83	1.19	85.7	2.3
330.18	9.88	254.95	7.88	77.2	3.3
385.08	5.02	302.01	7.88	78.4	2.3
448.42	6.13	372.59	11.77	83.1	2.9
531.83	6.33	423.54	5.89	79.6	1.5
653.60	18.41	511.77	3.54	78.3	2.3
801.65	24.82	535.30	11.77	66.8	2.5
927.17	10.96	605.89	5.89	65.3	1.0
1151.42	16.50	705.89	11.77	61.3	1.3
1347.29	19.23	758.84	11.77	56.3	1.2
1464.28	19.37	805.90	11.77	55.0	1.1
1624.21	21.68	876.49	11.78	54.0	1.0
1855.39	29.99	982.37	11.78	52.9	1.1
2031.14	31.93	1017.67	11.78	50.1	1.0
2190.01	28.28	1082.37	11.78	49.4	0.8
2374.04	30.89	1147.08	23.54	48.3	1.2

Table B.23 Wainwright B 28.0% W/O/W Emulsion Rheology

Haake Rotovisco RV3
Temperature: 59.25 ±0.10°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
55.15	±0.51	70.00	±0.59	126.9	±1.6
62.45	0.58	79.88	0.36	127.9	1.3
78.17	0.75	102.35	0.36	130.9	1.3
88.33	0.87	116.36	0.36	131.7	1.4
109.96	1.11	152.94	1.18	139.1	1.8
125.63	1.61	184.36	3.88	146.7	3.6
155.49	2.34	223.53	3.88	143.8	3.3
176.07	2.46	293.30	2.01	166.6	2.6
224.09	2.39	363.54	1.20	162.2	1.8
254.05	2.77	417.65	2.37	164.4	2.0
318.84	3.43	514.13	1.22	161.2	1.8
385.75	4.35	623.54	5.89	161.6	2.4
448.66	5.06	744.72	1.26	166.0	1.9
527.53	5.97	877.66	5.91	166.4	2.2
638.09	7.42	1075.31	0.73	168.5	2.0
702.08	8.24	1176.49	5.92	167.6	2.1

Table B.24 Wainwright B 28.0% W/O/W Emulsion Rheology

Haake Rotovisco RV3
Temperature: 78.20 ±0.05°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
112.90	±4.08	71.30	±0.24	63.1	±2.3
127.85	4.63	86.12	0.24	67.4	2.4
165.07	6.63	91.18	0.36	55.2	2.2
177.43	1.89	103.18	0.13	58.2	0.6
221.56	2.32	137.30	0.36	62.0	0.7
252.62	2.74	160.00	0.83	63.3	0.8
317.74	3.42	201.53	0.83	63.4	0.7
384.28	4.54	244.71	5.88	63.7	1.7
446.52	5.16	300.01	1.19	67.2	0.8
525.40	5.99	356.12	5.89	67.8	1.4
635.61	7.44	445.89	1.21	70.2	0.8
755.48	9.06	532.95	5.89	70.5	1.2
900.84	10.92	661.19	2.39	73.4	0.9
1112.94	13.56	823.54	5.90	74.0	1.0
1282.25	16.24	964.72	5.91	75.2	1.1
1421.16	18.08	1058.84	5.92	74.5	1.0
1564.48	20.07	1176.49	11.79	75.2	1.2

Table B.25 Wainwright B 34.4% W/O/W Emulsion Rheology

Haake Rotovisco RV3
Temperature: 22.75 ±0.05°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
20.15	±0.22	58.24	±0.35	289.1	±3.6
22.80	0.25	61.88	0.59	271.4	3.9
28.62	0.36	71.88	0.59	251.2	3.8
32.12	0.44	75.88	0.36	236.2	3.4
39.66	0.36	89.77	0.24	226.3	2.1
45.36	0.50	99.77	0.24	219.9	2.5
56.65	0.69	114.83	0.25	202.7	2.5
64.60	1.03	128.59	0.83	199.1	3.4
79.59	1.58	144.71	0.36	181.8	3.6
89.74	1.36	169.41	0.37	188.8	2.9
113.91	1.26	196.47	0.37	172.5	1.9
128.21	1.29	218.47	0.38	170.4	1.7
160.91	1.60	258.48	0.39	160.6	1.6
185.68	2.41	283.89	0.39	152.9	2.0
232.15	3.20	320.36	0.40	138.0	1.9
260.41	2.90	352.95	0.85	135.5	1.5
326.43	3.58	408.24	1.20	125.1	1.4
395.19	4.29	470.60	5.89	119.1	2.0
457.71	5.17	527.07	2.37	115.2	1.4
534.32	6.02	602.36	5.89	112.7	1.7
646.18	7.42	709.42	2.39	109.8	1.3
769.39	8.96	817.66	5.90	106.3	1.5
917.21	10.85	948.25	3.57	103.4	1.3
1118.81	14.61	1111.78	5.92	99.4	1.4
1227.99	16.16	1176.49	82.36	95.8	6.8

Table B.26 Wainwright B 34.4% W/O/W Emulsion Rheology

Haake Rotovisco RV3
Temperature: 39.50 ±0.05°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
19.63	±0.21	70.59	±5.88	359.5	±30.2
22.22	0.23	76.35	0.24	343.6	3.8
27.87	0.33	94.35	0.36	338.6	4.2
31.29	0.39	101.18	0.24	323.3	4.1
39.04	0.41	129.41	0.36	331.5	3.6
44.59	0.44	142.00	0.83	318.5	3.6
55.64	0.51	175.65	0.83	315.7	3.3
63.05	0.58	196.83	0.37	312.2	2.9
79.53	1.04	242.36	0.38	304.8	4.0
91.01	1.12	258.83	0.39	284.4	3.5
113.59	1.19	309.77	2.01	272.7	3.4
127.84	1.44	335.30	2.01	262.3	3.4
160.07	1.93	409.42	1.20	255.8	3.2
185.80	1.86	441.18	35.30	237.5	19.1
227.47	3.68	505.89	3.54	222.4	3.9
254.66	2.91	582.36	3.55	228.7	3.0
321.80	3.48	705.89	35.30	219.4	11.2
391.22	4.42	823.54	5.90	210.5	2.8
457.68	5.89	947.08	11.78	206.9	3.7
545.32	6.09	1052.96	47.06	193.1	8.9
648.00	7.36	1176.49	23.54	181.6	4.2

Table B.27 Wainwright B 34.4% W/O/W Emulsion Rheology

Haake Rotovisco RV3
Temperature: 59.70 ±0.05°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
39.13	±0.36	56.12	±0.47	143.4	±1.8
44.37	0.42	62.35	0.24	140.5	1.4
55.10	0.55	78.24	0.36	142.0	1.6
62.41	0.63	92.24	0.36	147.8	1.6
78.02	0.81	115.30	0.25	147.8	1.6
88.35	0.91	136.83	0.36	154.9	1.6
110.84	1.12	172.94	0.37	156.0	1.6
125.28	1.26	202.00	0.37	161.2	1.6
157.22	1.59	258.48	0.39	164.4	1.7
179.58	1.86	294.12	0.39	163.8	1.7
224.84	2.38	360.83	0.41	160.5	1.7
253.97	2.68	410.60	1.20	161.7	1.8
319.18	3.45	510.60	1.22	160.0	1.8
387.16	4.49	608.25	5.89	157.1	2.4
450.12	5.18	722.37	2.39	160.5	1.9
529.02	6.05	838.84	5.90	158.6	2.1
639.31	7.45	1023.55	5.91	160.1	2.1
742.63	8.78	1176.49	5.92	158.4	2.0

Table B.28 Wainwright B 34.4% W/O/W Emulsion Rheology

Haake Rotovisco RV3
Temperature: 79.20 ±0.05°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
79.41	±1.17	54.59	±0.24	68.7	±1.1
90.04	1.33	63.18	0.24	70.2	1.1
113.09	1.58	73.06	0.24	64.6	0.9
126.31	1.27	83.53	0.24	66.1	0.7
157.11	1.80	103.18	0.24	65.7	0.8
178.58	2.22	122.71	0.36	68.7	0.9
224.57	2.58	149.06	0.36	66.4	0.8
252.93	2.72	172.59	0.37	68.2	0.7
318.57	3.48	216.83	0.83	68.1	0.8
386.13	4.61	258.83	0.39	67.0	0.8
448.73	5.25	311.77	2.01	69.5	0.9
527.12	6.12	363.54	1.20	69.0	0.8
635.73	7.35	451.77	3.54	71.1	1.0
756.71	8.87	543.54	5.89	71.8	1.1
903.02	10.79	662.36	2.39	73.4	0.9
1109.72	13.92	823.54	5.90	74.2	1.1
1274.97	16.51	988.25	5.91	77.5	1.1
1442.36	21.02	1088.25	5.92	75.4	1.2
1624.20	23.86	1176.49	11.79	72.4	1.3

Table B.29 Wainwright B 42.0% W/O/W Emulsion Rheology

Haake Rotovisco RV3
Temperature: 22.95 ±0.05°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
80.16	±0.96	58.82	±0.35	73.4	±1.0
90.89	1.10	62.94	0.24	69.3	0.9
112.99	1.09	75.53	0.36	66.8	0.7
128.16	1.25	83.41	0.36	65.1	0.7
161.10	1.73	99.41	0.83	61.7	0.8
183.75	1.89	107.65	0.36	58.6	0.6
221.37	3.93	126.24	0.36	57.0	1.0
251.86	6.66	165.06	0.37	65.5	1.7
347.84	3.65	179.65	0.37	51.6	0.6
400.69	9.28	194.12	5.88	48.4	1.8
459.66	6.04	221.53	1.18	48.2	0.7
540.08	6.81	244.71	5.88	45.3	1.2
647.43	7.40	285.53	1.19	44.1	0.5
773.65	9.30	329.42	5.89	42.6	0.9
919.98	11.44	373.30	0.85	40.6	0.5
1127.23	13.62	447.07	5.89	39.7	0.7
1308.19	19.75	505.89	2.37	38.7	0.6
1537.87	53.01	535.30	5.89	34.8	1.3
1668.52	48.86	552.95	23.53	33.1	1.7
1868.14	27.46	611.78	11.77	32.7	0.8
1984.45	39.67	635.31	11.77	32.0	0.9
2128.49	28.30	694.13	23.53	32.6	1.2
2317.71	32.45	764.72	23.53	33.0	1.1
2583.82	36.50	841.19	23.54	32.6	1.0

Table B.30 Wainwright B 42.0% W/O/W Emulsion Rheology

Haake Rotovisco RV3
Temperature: 40.55 ±0.05°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
28.94	±0.33	60.00	±5.88	207.3	±20.5
40.99	0.47	70.59	5.88	172.2	14.5
56.28	0.74	87.06	5.88	154.7	10.6
[illegible]	0.85	121.18	5.88	152.7	7.6
[illegible]	.21	156.47	5.88	138.2	5.4
[illegible]	.14	176.47	5.88	147.8	24.2
12[illegible]	.73	160.00	5.88	124.0	4.9
[illegible]	.05	152.94	5.88	81.5	7.3
230[illegible]	2.36	177.65	5.88	77.0	2.7
264.5[illegible]	3.10	192.94	5.88	72.9	2.4
331.48	3.75	217.65	5.88	65.7	1.9
354.10	14.47	245.89	5.88	69.4	3.3
411.90	12.34	164.71	5.88	40.0	1.9
545.94	9.80	176.47	5.88	32.3	1.2
622.79	9.60	204.71	11.77	32.9	2.0
738.88	9.92	324.71	23.53	43.9	3.2
868.14	61.64	400.01	29.41	46.1	4.7
925.66	11.59	329.42	11.77	35.6	1.3
1025.93	12.86	265.89	17.65	25.9	1.8
1101.39	45.39	227.06	23.53	20.6	2.3
1173.25	48.38	241.18	23.53	20.6	2.2

Table B.31 Wainwright B 42.0% W/O/W Emulsion Rheology

Haake Rotovisco RV3
Temperature: 60.00 ±0.05°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
39.46	±0.51	52.94	±5.88	134.2	±15.0
56.03	0.74	65.88	5.88	117.6	10.6
79.40	1.09	94.12	5.88	118.5	7.6
115.55	1.10	116.47	5.88	100.8	5.2
130.62	1.26	125.88	5.88	96.4	4.6
162.53	1.73	144.71	5.88	89.0	3.7
184.90	2.12	158.83	5.88	85.9	3.3
233.73	2.40	181.18	5.88	77.5	2.6
287.45	21.01	194.12	5.88	67.5	5.3
388.94	21.61	200.00	5.88	51.4	3.2
401.47	12.70	211.77	5.88	52.7	2.2
446.90	5.62	243.53	5.88	54.5	1.5
527.10	7.88	304.71	5.89	57.8	1.4
657.35	8.31	350.59	11.77	53.3	1.9
803.80	12.97	388.24	11.77	48.3	1.7
928.27	21.37	429.42	11.77	46.3	1.7
1036.79	12.94	308.24	17.65	29.7	1.7
1114.28	15.55	236.47	17.65	21.2	1.6
1258.36	48.16	220.00	23.53	17.5	2.0
1394.53	18.51	264.71	23.53	19.0	1.7
1570.34	21.06	305.89	23.53	19.5	1.5

Table B.32 Wainwright B 42.0% W/O/W Emulsion Rheology

Haake Rotovisco RV3
Temperature: 79.50 ±0.05°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
56.42	±0.53	47.06	±5.88	83.4	±10.5
79.92	0.78	62.35	5.88	78.0	7.4
113.69	1.11	80.00	5.88	70.4	5.2
160.05	1.66	104.71	11.77	65.4	7.4
184.41	3.29	117.65	5.88	63.8	3.4
233.22	3.42	131.77	5.88	56.5	2.7
262.29	3.20	144.71	5.88	55.2	2.3
328.94	3.75	164.71	5.88	50.1	1.9
401.13	5.18	188.24	5.88	46.9	1.6
483.10	7.13	203.53	5.88	42.1	1.4
581.81	6.57	216.47	5.88	37.2	1.1
647.92	16.04	231.77	5.88	35.8	1.3
770.61	20.57	283.53	5.88	36.8	1.2
1008.59	22.75	298.83	5.89	29.6	0.9
1085.96	17.80	411.77	11.77	37.9	1.2
1308.05	20.56	423.54	11.77	32.4	1.0
1364.55	22.56	436.48	11.77	32.0	1.0
1509.00	25.08	458.83	17.65	30.4	1.3

Table B.33 Wainwright B 46.4% W/O/W Emulsion Rheology

Haake Rotovisco RV3
Temperature: 22.60 ±0.10°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
55.90	±0.70	65.06	±0.24	116.4	±1.5
63.30	0.79	69.77	0.24	110.2	1.4
78.95	0.84	87.06	0.24	110.3	1.2
90.27	0.89	95.30	0.24	105.6	1.1
112.14	1.16	115.06	0.14	102.6	1.1
126.05	1.24	130.94	0.36	103.9	1.1
159.31	2.41	164.36	0.37	103.2	1.6
182.02	2.70	174.12	0.37	95.7	1.4
225.35	2.35	212.95	0.83	94.5	1.1
256.41	2.82	240.00	0.84	93.6	1.1
323.05	3.46	287.06	1.19	88.9	1.0
391.59	4.51	333.30	1.19	85.1	1.0
453.83	5.04	383.54	1.20	84.5	1.0
534.87	6.07	441.18	5.89	82.5	1.4
667.44	26.61	514.13	3.54	77.0	3.1
803.16	35.43	527.07	11.77	65.6	3.2
918.66	11.28	600.01	3.55	65.3	0.9
1130.87	13.99	720.01	5.90	63.7	0.9
1309.20	16.54	800.01	11.77	61.1	1.2
1442.66	18.38	864.72	11.78	59.9	1.1
1622.28	20.27	952.96	11.78	58.7	1.0
1851.34	23.62	1058.84	5.92	57.2	0.8
1991.03	30.11	1117.67	5.92	56.1	0.9
2118.79	32.18	1176.49	11.79	55.5	1.0

Table B.34 Wainwright B 46.4% W/O/W Emulsion Rheology

Haake Rotovisco RV3
Temperature: 40.15 ±0.10°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
158.41	±1.59	54.24	±0.24	34.2	±0.4
179.61	1.82	61.06	0.12	34.0	0.4
223.60	2.50	75.53	0.24	33.8	0.4
251.64	2.67	88.24	0.24	35.1	0.4
315.73	3.40	114.24	0.24	36.2	0.4
384.73	4.22	142.36	5.88	37.0	1.6
450.20	5.13	168.59	0.37	37.4	0.4
535.91	6.84	196.12	5.88	36.6	
663.55	9.86	223.89	1.54	33.7	0.6
781.98	13.37	243.53	5.88	31.1	0.9
915.11	10.92	281.53	1.19	30.8	0.4
1130.47	14.25	[illegible]	5.89	30.0	0.6
1297.35	18.29	375.65	5.89	29.0	0.6
1419.86	17.68	417.65	11.77	29.4	0.9
1597.53	20.12	470.60	5.89	29.5	0.5
1807.64	23.90	541.19	3.54	29.9	0.4
1925.59	24.80	598.83	5.89	31.1	0.5
2110.17	28.34	682.36	11.77	32.3	0.7
2296.90	30.81	747.07	5.90	32.5	0.5
2477.04	35.26	823.54	11.78	33.2	0.7
2586.73	47.20	847.07	35.30	32.7	1.5
2680.39	48.99	882.37	58.83	32.9	2.3

Table B.35 Wainwright B 46.4% W/O/W Emulsion Rheology

Haake Rotovisco RV3
Temperature: 59.25 ±0.15°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
110.63	±1.44	55.18	±0.24	49.9	±0.6
125.27	1.30	65.18	0.24	52.0	0.6
157.21	1.59	82.59	0.24	52.5	0.6
179.28	1.93	95.18	0.24	53.1	0.6
225.42	2.34	116.47	0.25	51.7	0.5
252.92	2.73	130.94	0.36	51.8	0.6
315.67	3.45	168.59	0.83	53.2	0.6
386.75	4.23	205.53	5.88	53.1	1.6
460.04	10.56	240.00	1.19	52.2	1.2
530.30	10.92	255.30	5.88	48.1	1.5
633.59	7.47	325.54	7.88	51.4	1.4
759.66	8.97	392.12	7.89	51.6	1.2
908.14	10.78	464.71	58.83	51.2	6.5
1110.70	14.37	570.60	17.65	51.4	1.7
1266.06	15.66	688.25	29.42	54.4	2.4
1394.50	17.50	794.13	29.42	56.9	2.2
1574.35	20.32	958.84	35.30	60.9	2.4
1793.13	23.41	1129.43	23.54	63.0	1.5

Table B.36 Wainwright B 46.4% W/O/W Emulsion Rheology

Haake Rotovisco RV3
Temperature: 79.60 ±0.10°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
110.78	±1.36	59.53	±0.24	53.7	±0.7
125.45	1.55	71.88	0.24	57.3	0.7
157.55	1.80	88.00	0.24	55.9	0.7
176.66	1.81	103.53	0.24	58.6	0.6
221.06	2.32	138.83	0.83	62.8	0.8
251.93	2.84	165.06	0.37	65.5	0.8
316.93	3.42	208.24	0.37	65.7	0.7
384.55	4.25	257.65	5.88	67.0	1.7
448.53	5.09	308.59	0.84	68.8	0.8
525.46	6.10	363.18	5.89	69.1	1.4
634.29	7.38	457.66	1.21	72.2	0.9
750.83	9.25	552.95	5.89	73.6	1.2
896.38	11.33	715.31	3.56	79.8	1.1
1113.23	13.52	894.13	5.91	80.3	1.1
1282.54	15.89	1041.20	3.58	81.2	1.0
1418.38	17.74	1149.43	5.92	81.0	1.1

Table B.37 Wainwright B 54.0% W/O/W Emulsion Rheology

Brookfield Synchrolectric, LVTD
Temperature: 22.90 ±0.10°C

Shear Rate sec^{-1}	Shear Stress $dynes/cm^2$	Viscosity cP
0.39 ± 0.01	0.63 ± 0.01	163.0 ± 3.6
0.77 0.01	0.93 0.01	120.8 1.8
1.93 0.02	1.86 0.01	96.2 1.1
3.87 0.04	2.83 0.02	73.2 0.8
7.74 0.07	4.11 0.02	53.1 0.6

Table B.38 Wainwright B 54.0% W/O/W Emulsion Rheology

Brookfield Sychrolectric LVTD
Temperature: 40.00 ±0.10°C

Shear Rate sec^{-1}	Shear Stress $dynes/cm^2$	Viscosity cP
0.77 ± 0.01	0.49 ± 0.01	63.0 ± 1.3
1.94 0.02	0.95 0.01	49.1 0.6
3.87 0.04	1.55 0.01	39.9 0.4
7.74 0.08	2.49 0.01	32.1 0.3
15.49 0.15	3.46 0.01	22.0 0.2
38.72 0.38	6.04 0.02	15.5 0.2

Table B.39 Wainwright B 54.0% W/O/W Emulsion Rheology

Brookfield Sychrolectric LVTD
Temperature: 60.00 ±0.10°C

Shear Rate sec^{-1}	Shear Stress $dynes/cm^2$	Viscosity cP
1.94 ± 0.02	0.52 ± 0.01	26.9 ± 0.5
3.89 0.04	0.78 0.01	20.1 0.3
7.78 0.08	1.13 0.01	14.5 0.2
15.55 0.16	1.59 0.01	10.2 0.1
38.88 0.41	3.06 0.01	7.9 0.1
77.75 0.81	5.32 0.01	6.8 0.1

Table B.40 Wainwright B 54.0% W/O/W Emulsion Rheology

Brookfield Sychrolectric LVTD
Temperature: 79.00 ±0.10°C

Shear Rate sec^{-1}	Shear Stress $dynes/cm^2$	Viscosity cP
3.77 ± 0.03	0.44 ± 0.01	11.5 ± 0.2
7.55 0.07	0.71 0.01	9.5 0.1
15.10 0.13	1.27 0.02	8.4 0.1
37.74 0.33	2.60 0.02	6.8 0.1
75.48 0.66	4.48 0.02	5.9 0.1

Table B.41 Wainwright B 95.6% O/W Emulsion Rheology

Haake Rotovisco RV3
Temperature: 23.90 ±0.05°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
524.25	±6.56	52.94	±5.88	10.1	±1.1
633.55	8.04	63.53	5.88	10.0	0.9
738.89	9.36	81.18	8.24	11.0	1.1
878.79	10.69	125.88	5.88	14.3	0.7
1090.00	13.63	189.42	11.77	17.4	1.1
1258.93	15.84	231.77	5.88	18.4	0.5
1396.88	19.57	277.65	11.77	19.9	0.9
1537.75	21.70	305.89	11.77	19.9	0.8

Table B.42 Wainwright B 95.6% O/W Emulsion Rheology

Haake Rotovisco RV3
Temperature: 39.70 ±0.10°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
313.75	±3.46	60.00	±3.53	19.1	±1.1
381.96	4.29	78.82	5.88	20.6	1.6
441.70	5.42	94.12	5.88	21.3	1.4
515.39	5.88	127.06	5.88	24.7	1.2
622.89	7.23	178.83	5.88	28.7	1.0
740.36	8.74	247.06	11.77	33.4	1.6
882.68	10.60	344.71	11.77	39.1	1.4
1090.39	13.48	510.60	23.53	46.8	2.2
1264.67	16.00	632.95	35.30	50.0	2.9
1418.10	18.61	714.13	35.30	50.4	2.6
1596.88	21.17	796.48	35.30	49.9	2.3

Table B.43 Wainwright B 95.6% O/W Emulsion Rheology

Haake Rotovisco RV3
Temperature: 59.30 ±0.10°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
312.07	±3.39	61.18	±2.35	19.6	±0.8
379.91	4.20	82.35	3.53	21.7	1.0
442.97	4.96	102.35	5.88	23.1	1.4
517.74	5.95	129.41	5.88	25.0	1.2
624.90	7.26	178.83	5.88	28.6	1.0
742.77	8.79	236.47	11.77	31.8	1.6
884.16	10.61	323.54	11.77	36.6	1.4
1093.35	13.75	470.60	11.77	43.0	1.2
1277.90	17.80	564.72	35.30	44.2	2.8
1462.89	22.62	611.78	41.18	41.8	2.9
1647.31	25.66	652.95	41.18	39.6	2.6

Table B.44 Wainwright B 95.6% O/W Emulsion Rheology

Haake Rotovisco RV3
Temperature: 79.10 ±0.15°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
311.23	±3.42	63.53	±2.35	20.4	±0.8
378.89	4.24	84.71	5.88	22.4	1.6
443.39	5.63	110.59	11.77	24.9	2.7
522.11	6.34	130.59	17.65	25.0	3.4
627.08	7.26	172.94	17.65	27.6	2.8
739.27	9.11	225.89	23.53	30.6	3.2
882.64	11.21	341.18	23.53	38.7	2.7
1100.66	13.67	463.54	29.41	42.1	2.7
1284.56	18.28	547.07	35.30	42.6	2.8
1432.71	19.66	588.25	35.30	41.1	2.5
1613.33	22.34	662.36	35.30	41.1	2.3

Table B.45 Wainwright B 97.6% O/W Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 22.20 ±0.10°C

Shear Rate sec^{-1}	Shear Stress $dynes/cm^2$	Viscosity cP
7.38 ± 0.07	0.09 ± 0.01	1.2 ± 0.1
14.76 0.13	0.17 0.01	1.1 0.1
36.90 0.33	0.41 0.01	1.1 0.0
73.80 0.66	0.81 0.01	1.1 0.0

Table B.46 Wainwright B 97.6% O/W Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 40.30 ±0.10°C

Shear Rate sec^{-1}	Shear Stress $dynes/cm^2$	Viscosity cP
7.40 ± 0.08	0.07 ± 0.01	1.0 ± 0.1
14.79 0.15	0.12 0.01	0.8 0.1
36.98 0.38	0.30 0.01	0.8 0.0
73.95 0.77	0.62 0.01	0.8 0.0

Table B.47 Wainwright B 97.6% O/W Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 59.60 ±0.10°C

Shear Rate sec^{-1}	Shear Stress $dynes/cm^2$	Viscosity cP
7.34 ± 0.08	0.06 ± 0.01	0.8 ± 0.2
14.68 0.17	0.09 0.01	0.6 0.1
36.70 0.42	0.24 0.01	0.6 0.0
73.41 0.84	0.59 0.01	0.8 0.0

Table B.48 Wainwright B 97.6% O/W Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 74.50 ±0.20°C

Shear Rate sec^{-1}	Shear Stress $dynes/cm^2$	Viscosity cP
7.34 ± 0.10	0.06 ± 0.01	0.8 ± 0.2
14.68 0.21	0.08 0.01	0.6 0.1
36.70 0.51	0.21 0.01	0.6 0.0
73.40 1.03	0.57 0.01	0.8 0.0

Table B.49 Epping 0.9% (dried) W/O Emulsion Rheology

Haake Rotovisco RV3
Temperature: 23.05 ±0.05°C

Shear Rate sec^{-1}	Shear Stress $dynes/cm^2$	Viscosity cP
0.33 ± 0.00	48.82 ± 0.59	14603.8 ±219.7
0.47 0.00	65.88 0.36	13937.4 143.7
0.67 0.01	92.24 0.47	13677.7 144.4
0.96 0.01	121.18 0.83	12620.6 137.9
1.35 0.01	164.36 1.53	12134.4 150.5
1.92 0.02	225.53 0.83	11749.6 104.5
2.72 0.02	309.77 0.84	11382.5 96.7
3.40 0.03	378.48 2.36	11133.8 117.1
3.84 0.03	430.60 2.37	11224.7 111.0
4.80 0.04	531.77 2.37	11078.3 102.6
5.45 0.04	603.54 2.38	11082.8 99.9
6.83 0.06	751.78 2.40	11014.2 96.4
7.73 0.06	844.72 2.41	10929.9 94.4
9.70 0.08	1048.25 2.43	10[illegible]8.7 92.4
10.98 0.09	1176.49 2.46	10[illegible].7 91.4

Table B.50 Epping 0.9% (dried) W/O Emulsion Rheology

Haake Rotovisco RV3
Temperature: 40.55 ±0.10°C

Shear Rate sec^{-1}	Shear Stress $dynes/cm^2$	Viscosity cP
1.92 ± 0.02	47.65 ± 0.47	2481.3 ± 31.9
2.72 0.02	64.71 1.18	2377.4 47.4
3.41 0.03	80.00 1.77	2349.4 55.3
3.85 0.03	88.83 1.77	2305.1 49.5
4.67 0.06	109.41 1.18	2343.3 40.8
5.32 0.12	160.83 3.88	3020.7 100.7
7.76 0.08	172.59 3.88	2225.5 54.7
7.85 0.15	178.47 2.00	2273.8 50.3
9.71 0.08	219.65 2.00	2262.6 27.8
10.98 0.09	247.42 1.42	2253.9 22.7
13.75 0.11	305.53 1.19	2222.6 20.5
15.53 0.13	343.89 2.01	2214.4 22.7
19.47 0.17	428.24 1.20	2199.9 19.8
22.03 0.19	484.71 1.21	2200.5 19.7
27.58 0.24	603.54 1.23	2188.1 19.6
31.21 0.27	683.54 1.25	2190.2 19.7
39.06 0.35	854.13 1.28	2186.7 19.8
44.38 0.40	964.72 1.31	2174.0 19.8
55.57 0.51	1194.14 2.46	2148.9 20.2

Table B.51 Epping 0.9% (dried) W/O Emulsion Rheology

Haake Rotovisco RV3
Temperature: 59.80 ±0.05°C

Shear Rate sec^{-1}	Shear Stress $dynes/cm^2$	Viscosity cP
9.74 ± 0.12	62.35 ± 1.18	640.0 ± 14.6
11.03 0.14	66.47 0.24	602.8 8.0
13.72 0.12	83.53 0.59	608.6 6.8
15.61 0.13	92.94 0.59	595.3 6.3
19.42 0.20	113.77 0.59	585.9 6.7
22.01 0.23	133.30 2.00	605.7 11.2
27.65 0.27	161.53 0.83	584.3 6.5
31.29 0.31	185.89 0.83	594.0 6.4
39.36 0.35	225.53 0.83	573.0 5.5
44.43 0.40	252.12 0.84	567.4 5.5
55.58 0.51	312.59 0.84	562.4 5.4
62.87 0.58	351.42 0.85	558.9 5.4
78.53 0.74	437.65 1.21	557.3 5.5
89.20 0.86	497.66 1.21	557.9 5.5
111.58 1.11	614.13 1.23	550.4 5.6
126.47 1.29	702.37 1.25	555.4 5.7
158.26 1.63	861.19 1.28	544.1 5.7
179.83 1.92	983.55 1.31	546.9 5.9
225.19 2.45	1194.14 2.46	530.3 5.9

Table B.52 Epping 0.9% (dried) W/O Emulsion Rheology

Haake Rotovisco RV3
Temperature: 79.35 ±0.10°C

Shear Rate sec^{-1}	Shear Stress $dynes/cm^2$	Viscosity cP
27.80 ± 0.24	62.94 ± 0.59	226.4 ± 2.9
31.48 0.28	70.59 1.18	224.2 4.2
39.47 0.35	85.18 0.59	215.8 2.4
44.70 0.40	94.47 0.36	211.3 2.1
55.27 0.65	114.71 0.25	207.5 2.5
62.81 0.86	136.47 0.83	217.3 3.3
79.04 0.95	161.53 0.37	204.4 2.5
89.42 1.01	186.71 0.37	208.8 2.4
112.28 1.20	223.89 0.38	199.4 [illegible]
126.54 1.27	254.95 0.84	201.5 [illegible]
159.03 1.62	312.95 0.40	196.8 2.0
180.15 1.86	347.06 0.41	192.6 2.0
224.88 2.34	42[illegible].2 1.20	190.4 2.1
254.10 2.67	48[illegible].5 1.21	190.3 2.1
318.41 3.42	603.54 1.23	189.5 2.1
387.87 4.24	728.25 5.90	187.8 2.6
450.87 5.02	844.72 2.41	187.4 2.2
530.69 6.13	995.31 5.91	187.6 2.4
641.33 7.54	1176.49 3.60	183.4 2.2

Table B.53 Epping 14.4% W/O Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 23.80 ±0.20°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
0.06	±0.00	4.10	±0.02	6494.7	±107.4
0.13	0.00	8.54	0.02	6762.7	57.5
0.06	0.01	4.00	0.06	6326.0	510.6
0.13	0.01	7.64	0.07	6034.0	473.4
0.32	0.02	19.55	0.08	6180.0	480.5
0.63	0.05	39.87	0.13	6301.6	489.4
0.31	0.03	18.73	0.25	5981.9	490.7
0.63	0.05	38.97	0.30	6224.9	505.8
1.25	0.10	79.58	0.45	6355.8	515.3
2.50	0.20	159.52	0.80	6389.8	516.1
1.25	0.10	78.76	1.30	6312.9	532.3
2.50	0.21	154.78	1.76	6203.3	517.8
6.24	0.52	382.31	3.58	6128.8	510.0
12.48	1.03	761.89	6.88	6106.9	509.0

Table B.54 Epping 14.4% W/O Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 37.00 ±0.20°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
0.07	±0.00	1.10	±0.02	1694.6	±36.5
0.13	0.00	2.24	0.02	1724.9	18.8
0.33	0.00	5.71	0.02	1755.2	8.5
0.65	0.00	11.58	0.02	1781.8	5.6
0.31	0.00	6.56	0.06	2097.1	22.6
0.63	0.00	13.08	0.07	2092.2	13.6
1.25	0.00	25.74	0.09	2057.8	10.0
2.50	0.01	48.15	0.63	1924.8	25.9
0.62	0.00	13.23	0.24	2138.0	41.0
1.24	0.01	25.98	0.27	2100.2	24.3
2.47	0.01	52.20	0.34	2109.6	17.9
6.19	0.03	128.74	2.42	2081.3	40.7
2.46	0.03	59.07	1.21	2397.3	55.0
6.16	0.06	141.66	1.67	2299.6	35.8
12.32	0.13	281.68	2.74	2286.3	32.2

Table B.55 Epping 14.4% W/O Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 58.00 ±0.20°C

Shear Rate sec^{-1}		Shear Stress dynes/cm^2		Viscosity cP	
0.32	±0.00	1.58	±0.0	489.2	±5.3
0.65	0.00	3.25	0.02	502.6	3.0
1.29	0.00	6.60	0.02	510.5	2.1
2.59	0.01	13.43	0.03	519.0	1.8
0.62	0.00	3.39	0.06	544.7	10.3
1.24	0.00	6.90	0.06	554.6	5.6
2.49	0.01	13.61	0.07	547.2	3.6
6.22	0.02	33.53	0.11	539.3	2.8
2.45	0.02	15.68	0.25	639.5	11.0
6.13	0.04	36.05	0.29	587.9	6.3
12.26	0.09	71.74	0.42	585.1	5.4

Table B.56 Epping 14.4% W/O Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 74.00 ±0.20°C

Shear Rate sec^{-1}		Shear Stress dynes/cm^2		Viscosity cP	
0.67	±0.00	1.36	±0.02	202.9	±2.7
1.34	0.01	2.68	0.02	200.0	1.7
2.68	0.02	5.23	0.02	195.0	1.3
6.71	0.04	13.16	0.03	196.1	1.2
1.30	0.01	2.74	0.06	211.5	5.0
2.59	0.02	5.97	0.31	230.6	12.0
6.48	0.04	12.68	0.07	195.9	1.7
12.95	0.09	26.08	0.09	201.3	1.5
6.45	0.03	16.15	0.25	250.5	4.0
12.89	0.06	30.31	0.28	235.1	2.4

Table B.57 Epping 17.0% W/O Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 22.30 ±0.10°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
0.06	±0.00	5.08	±0.02	7935.5	±130.0
0.13	0.00	10.45	0.02	8156.6	68.7
0.05	0.01	3.94	0.06	7192.2	1403.6
0.11	0.02	8.56	0.07	7810.3	1516.5
0.27	0.05	22.72	0.09	8293.5	1608.3
0.55	0.11	46.37	0.14	8462.0	1640.7
0.27	0.06	22.00	0.26	8175.0	1684.1
0.54	0.11	45.53	0.32	8457.6	1740.4
1.08	0.22	91.99	0.50	8544.6	1757.8
2.15	0.44	184.33	0.92	8560.9	1761.1
1.07	0.23	89.15	1.35	8341.2	1778.4
2.14	0.45	176.12	1.91	8238.8	1754.4
5.34	1.14	435.91	4.03	8156.9	1736.3
10.69	2.27	843.93	7.60	7896.0	1680.7

Table B.58 Epping 17.0% W/O Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 38.80 ±0.10°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
0.07	±0.00	1.23	±.02	1886.6	±39.9
0.13	0.00	2.53	0.02	1941.1	22.2
0.33	0.00	6.44	0.02	1978.5	13.3
0.65	0.00	12.86	0.02	1976.1	11.4
0.13	0.00	2.65	0.06	2114.7	53.9
0.31	0.00	8.07	0.07	2577.0	27.6
0.63	0.00	15.86	0.08	2532.7	20.3
1.25	0.01	31.53	0.11	2518.0	18.0
0.62	0.00	17.44	0.25	2816.2	46.0
1.24	0.01	33.47	0.28	2702.8	31.2
2.48	0.02	51.26	0.34	2069.6	21.2
6.19	0.05	126.87	0.65	2048.8	19.1
2.45	0.03	55.79	1.20	2280.5	56.0
6.12	0.07	136.74	1.64	2235.7	37.6
12.23	0.14	259.80	2.56	2124.0	32.6

Table B:59 Epping 17.0% W/O Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 57.50 ±0.10°C

Shear Rate sec^{-1}		Shear Stress dynes/cm^2		Viscosity cp	
0.33	±0.00	1.62	±0.02	494.4	±5.3
0.66	0.00	3.29	0.02	501.6	2.9
1.31	0.00	6.60	0.02	502.8	2.0
2.62	0.01	13.28	0.03	506.4	1.6
0.63	0.00	4.43	0.06	702.0	10.3
1.26	0.00	8.93	0.07	706.9	5.9
2.53	0.01	17.55	0.08	694.7	4.0
6.32	0.02	33.80	0.11	535.3	2.6
1.25	0.01	10.77	0.24	861.5	19.8
2.50	0.01	20.13	[illegible]	805.3	11.1
6.25	0.03	39.79	[illegible]	636.8	6.0
12.50	0.07	73.73	[illegible]	590.0	4.7
12.33	0.12	113.76		922.7	15.2

Table B.60 Epping 17.0% W/O Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 73.00 ±0.50°C

Shear Rate sec^{-1}		Shear Stress dynes/cm^2		Viscosity cp	
0.33	±0.00	0.76	±0.02	228.6	±4.9
0.66	0.00	1.53	0.02	231.0	2.5
1.32	0.00	3.05	0.02	231.0	1.4
2.64	0.01	6.11	0.02	231.0	0.9
6.61	0.02	15.20	0.03	229.9	0.7
0.64	0.00	2.71	0.06	425.3	9.9
1.27	0.00	4.77	0.06	374.5	5.1
2.55	0.01	8.93	0.07	350.4	2.9
6.37	0.02	20.63	0.08	323.8	1.7
12.74	0.04	40.85	0.13	320.7	1.5
2.51	0.02	10.30	0.24	410.7	9.9
6.27	0.04	19.66	0.25	313.7	4.5
12.54	0.08	34.64	0.29	276.3	2.9

Table B.61 Epping 20.0% W/O Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 24.40 ±0.10°C

Shear Rate sec^{-1}		Shear Stress dynes cm^2		Viscosity cP	
0.07	±0.00	5.46	±0.02	8253.0	±134.7
0.13	0.00	10.92	0.02	8253.0	69.2
0.06	0.01	4.43	0.06	7732.2	1146.5
0.11	0.02	9.73	0.07	8483.9	1248.1
0.29	0.04	24.97	0.09	8709.4	1278.7
0.57	0.08	50.34	0.15	8779.2	1288.6
0.28	0.04	24.34	0.26	8621.0	1337.7
0.56	0.09	49.74	0.33	8807.6	1364.4
1.13	0.17	99.83	0.53	8838.6	1368.7
2.26	0.35	197.21	0.98	8729.9	1351.7
1.12	0.18	94.62	1.38	8426.9	1348.9
2.25	0.36	192.52	2.03	8573.1	1369.6
5.61	0.89	464.90	4.28	8280.8	1322.2
11.23	1.79	884.95	7.96	7881.4	1258.3

Table B.62 Epping 20.0% W/O Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 40.00 ±0.15°C

Shear Rate sec^{-1}		Shear Stress dynes/cm^2		Viscosity cP	
0.06	±0.00	1.29	±0.02	1990.5	±50.6
0.13	0.00	2.79	0.02	2154.3	39.6
0.32	0.01	6.92	0.02	2133.7	34.3
0.65	0.01	13.81	0.08	2130.0	33.5
0.13	0.01	3.23	0.06	2561.8	137.4
0.32	0.02	8.00	0.07	2537.4	127.3
0.63	0.03	15.73	0.08	2493.5	123.8
1.26	0.06	30.66	0.10	2430.1	120.4
2.52	0.12	59.48	0.18	2356.9	116.7
0.62	0.01	19.43	0.25	3150.6	72.1
1.23	0.02	35.46	0.29	2875.4	58.9
2.47	0.05	68.47	0.40	2775.8	54.6
6.17	0.12	168.18	0.84	2727.4	53.0
2.42	0.08	83.14	1.32	3438.8	132.5
6.04	0.21	185.96	1.99	3076.9	112.9
12.09	0.42	351.68	3.32	2909.4	105.8

Table B.63 Epping 20.0% W/O Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 60.60 ±0.15°C

Shear Rate sec^{-1}		Shear Stress dynes/cm^2		Viscosity cP	
0.14	±0.00	0.81	±0.02	589.9	±18.4
0.34	0.01	1.71	0.02	497.1	12.5
0.68	0.02	3.42	0.02	498.2	11.8
1.37	0.03	6.90	0.02	502.3	11.7
2.75	0.06	13.78	0.03	501.4	11.6
0.68	0.03	3.88	0.06	571.4	23.4
1.36	0.05	7.82	0.07	575.9	22.2
2.72	0.10	15.27	0.07	562.3	21.4
6.79	0.26	37.38	0.12	550.5	20.8
1.35	0.05	11.24	1.17	834.0	92.9
2.69	0.11	19.43	0.25	721.8	29.7
6.74	0.26	41.66	0.31	618.6	24.6
13.47	0.53	82.04	0.46	609.0	24.0

Table B.64 Epping 20.0% W/O Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 76.00 ±0.50°C

Shear Rate sec^{-1}		Shear Stress dynes/cm^2		Viscosity cP	
0.34	±0.00	0.90	±0.02	263.6	±4.8
0.68	0.00	1.75	0.02	256.6	2.5
1.36	0.00	3.40	0.02	249.7	1.5
2.72	0.01	6.71	0.02	246.5	1.1
2.63	0.01	7.33	0.06	278.3	2.7
6.58	0.03	16.99	0.08	258.2	1.6
13.16	0.06	33.25	0.11	252.6	1.4
6.56	0.03	18.73	0.25	285.4	4.0
13.12	0.05	34.64	0.29	264.0	2.4

Table B.65 Epping 20.4% W/O Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 23.40 ±0.10°C

Shear Rate sec^{-1}		Shear Stress dynes/cm^2		Viscosity cP	
0.07	±0.00	6.14	±0.02	9232.3	±150.2
0.13	0.00	12.23	0.02	9196.8	76.8
0.06	0.01	4.99	0.06	8470.6	1552.9
0.12	0.02	10.16	0.07	8627.5	1574.4
0.29	0.05	25.71	0.09	8732.0	1591.5
0.59	0.11	50.74	0.15	8617.0	1570.2
0.29	0.06	24.81	0.26	8544.6	1638.3
0.58	0.11	49.86	0.34	8584.9	1644.4
1.16	0.22	97.96	0.53	8433.8	1615.0
2.32	0.44	187.96	0.93	8091.2	1549.3
1.16	0.23	90.79	1.36	7857.6	1547.1
2.31	0.45	181.58	1.95	7857.6	1544.9
5.78	1.13	435.37	4.03	7535.7	1481.0
11.55	2.27	819.32	7.38	7090.8	1393.5

Table B.66 Epping 20.4% W/O Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 40.00 ±0.15°C

Shear Rate sec^{-1}		Shear Stress dynes/cm^2		Viscosity cP	
0.07	±0.00	1.54	±0.02	2282.9	±56.0
0.14	0.00	2.86	0.02	2114.0	38.8
0.34	0.01	7.24	0.03	2143.1	34.8
0.68	0.01	14.36	0.03	2124.5	33.4
0.13	0.00	3.20	0.06	2452.6	66.7
0.33	0.01	8.00	0.07	2452.5	47.6
0.65	0.01	15.92	0.08	2438.4	44.0
1.31	0.02	31.86	0.11	2440.8	43.1
0.65	0.01	20.25	0.25	3130.6	69.6
1.29	0.02	35.93	0.29	2777.8	55.6
2.59	0.05	67.76	0.40	2619.4	50.4
6.47	0.12	159.17	0.80	2461.1	46.4
2.61	0.10	70.01	1.26	2684.7	110.9
6.52	0.24	161.89	1.81	2483.3	96.4
13.04	0.48	309.57	2.97	2374.3	91.1

Table B.67 Epping 20.4% W/O Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 57.90 ±0.20°C

Shear Rate sec^{-1}		Shear Stress dynes/cm^2		Viscosity cP	
0.33	±0.00	1.72	±0.02	527.7	±5.3
0.65	0.00	3.50	0.02	536.2	3.0
1.31	0.00	7.08	0.02	542.2	2.1
2.61	0.01	14.25	0.03	545.2	1.7
0.63	0.00	4.56	0.06	724.8	10.4
1.26	0.00	8.31	0.07	661.1	5.8
2.51	0.01	14.78	0.07	587.7	3.7
6.29	0.02	36.39	0.12	578.9	2.8
2.48	0.01	17.44	0.25	703.5	10.8
8.20	0.03	40.38	0.30	651.6	6.1
12.39	0.07	77.95	0.44	628.9	5.0

Table B.68 Epping 20.4% W/O Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 75.00 ±0.20°C

Shear Rate sec^{-1}		Shear Stress dynes/cm^2		Viscosity cP	
0.35	±0.01	0.82	±0.02	236.9	±6.2
0.69	0.01	1.45	0.02	209.5	4.3
1.38	0.02	2.82	0.02	203.8	3.8
2.76	0.05	5.52	0.02	199.9	3.5
6.91	0.12	13.82	0.03	200.0	3.5
1.37	0.04	3.51	0.06	255.3	8.0
2.75	0.07	6.03	0.06	219.5	6.2
6.87	0.18	13.67	0.07	198.9	5.3
13.75	0.36	26.66	0.10	193.9	5.1
7.65	0.01	15.45	0.25	202.1	3.2
15.29	0.03	29.14	0.27	190.6	1.8

Table B.69 Epping 43.2% W/O/W Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 22.50 ±0.10°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
0.12	±0.00	6.83	±0.02	5749.8	±92.9
0.24	0.00	9.87	0.02	4153.4	34.3
0.12	0.02	4.31	0.06	3667.3	562.0
0.24	0.04	6.37	0.06	2711.2	412.8
0.59	0.09	10.93	0.07	1859.8	282.5
1.18	0.18	16.26	0.08	1383.1	210.0
2.35	0.36	23.89	0.09	1016.4	154.3
4.70	0.71	28.32	0.32	602.5	91.7
11.75	1.78	52.25	0.34	444.5	67.5
0.55	0.13	13.69	0.24	2482.2	605.3
1.10	0.27	18.49	0.25	1676.0	408.2
2.21	0.54	25.28	0.26	1145.6	278.9
4.41	1.07	36.75	0.29	832.7	202.6
11.03	2.68	53.84	1.20	487.9	119.2
22.07	5.37	88.95	1.25	403.1	98.2
11.8	0.00	52.51	5.49	443.5	46.4
23.68	0.00	83.14	2.31	351.1	9.8

Table B.70 Epping 43.2% W/O/W Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 39.50 ±0.50°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
0.08	±0.00	1.62	±0.02	2016.6	±56.1
0.16	0.00	2.66	0.02	1654.4	37.9
0.40	0.01	5.70	0.02	1417.5	29.9
0.80	0.02	10.11	0.02	1257.9	26.1
0.08	0.02	2.96	0.12	3499.2	731.5
0.17	0.03	4.19	0.06	2478.6	507.9
0.42	0.09	9.54	0.07	2259.9	461.9
0.84	0.17	18.23	0.08	2157.8	440.8
1.69	0.34	33.96	0.11	2010.2	410.6
0.42	0.09	14.04	0.24	3334.8	693.7
0.84	0.17	26.92	0.27	3195.8	663.1
1.68	0.35	47.40	0.33	2813.7	583.5
3.37	0.70	81.46	0.46	2417.7	501.3
8.42	1.75	152.15	1.38	1806.3	374.7
1.57	0.04	55.79	1.20	3554.2	111.3
3.14	0.07	106.65	1.45	3397.4	90.0
7.85	0.18	245.03	2.44	3122.1	77.5
15.70	0.36	415.68	6.61	2648.2	73.4

Table B.71 Epping 43.2% W/O/W Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 59.90 ±0.50°C

Shear Rate sec^{-1}		Shear Stress dynes/cm^2		Viscosity cP	
0.13	±0.00	0.99	±0.02	750.2	±14.7
0.33	0.00	2.41	0.02	728.8	8.1
0.66	0.01	4.93	0.02	745.4	6.8
1.32	0.01	9.90	0.02	749.0	6.4
0.32	0.00	3.26	0.06	1024.8	22.0
0.64	0.01	6.77	0.06	1063.4	14.3
1.27	0.01	13.36	0.07	1048.9	11.4
2.55	0.02	26.05	0.09	1022.3	10.3
1.26	0.01	12.76	0.24	1011.7	22.0
2.52	0.03	24.23	0.26	960.7	4.5
6.30	0.07	58.63	0.37	930.1	11.4
12.61	0.13	111.77	0.59	886.4	10.4
6.50	0.05	69.46	1.26	1069.3	20.9
12.99	0.10	131.27	1.60	1010.4	14.4

Table B.72 Epping 53.2% W/O/W Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 22.90 ±0.10°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
0.10	±0.00	1.68	±0.02	1699.5	±47.6
0.20	0.00	2.42	0.02	1223.0	28.7
0.50	0.01	4.53	0.02	913.3	19.7
0.99	0.02	7.04	0.02	710.8	15.1
1.98	0.04	11.20	0.02	565.0	11.9
0.20	0.00	2.56	0.06	1296.4	39.7
0.49	0.01	4.46	0.06	905.9	20.2
0.99	0.02	6.96	0.06	706.0	13.7
1.97	0.03	11.02	0.07	559.2	10.1
3.94	0.07	16.78	0.08	425.6	7.5
9.86	0.17	24.88	0.20	252.4	4.7
19.71	0.33	40.21	0.33	204.0	3.8
1.99	0.07	9.60	0.24	481.8	20.3
3.98	0.14	15.33	0.25	384.9	14.5
9.85	0.34	20.48	0.71	205.7	10.0
19.68	0.68	30.66	0.72	154.0	6.4

Table B.73 Epping 53.2% W/O/W Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 39.80 ±0.10°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
0.47	±0.01	1.09	±0.02	232.3	±7.3
0.93	0.03	1.87	0.02	200.3	5.8
1.87	0.05	3.02	0.02	161.6	4.6
3.74	0.10	4.79	0.02	128.2	3.6
9.35	0.26	8.36	0.05	89.4	2.5
0.93	0.03	2.71	0.06	292.8	10.8
1.85	0.05	4.28	0.06	231.3	7.5
3.70	0.11	6.96	0.06	188.0	5.7
9.25	0.27	8.13	0.19	87.8	3.2
18.50	0.54	13.95	0.07	75.4	2.2
8.00	0.01	9.71	0.47	121.4	5.9
16.00	0.02	15.57	0.25	97.3	1.5

Table B.74 Epping 53.2% W/O/W Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 59.20 ±0.10°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
0.38	±0.00	0.84	±0.02	224.3	±4.4
0.75	0.00	1.54	0.02	205.5	2.4
1.50	0.01	2.86	0.02	190.3	1.4
3.00	0.01	5.12	0.02	170.4	1.0
7.51	0.04	11.22	0.02	149.5	0.8
1.46	0.01	4.68	0.06	321.3	5.0
2.91	0.02	8.87	0.07	304.4	3.3
7.28	0.06	19.70	0.08	270.6	2.4
14.56	0.11	25.55	0.09	175.5	1.5
0.37	0.01	0.56	0.01	149.5	3.8
0.74	0.01	0.68	0.01	91.4	1.8
1.86	0.03	0.88	0.01	47.5	0.8
3.72	0.05	1.28	0.02	34.6	0.6
7.43	0.11	2.03	0.02	27.3	0.4
14.86	0.22	3.63	0.02	24.4	0.4

Table B.75 Epping 64.0% W/O/W Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 22.60 ±0.10°C

Shear Rate sec⁻¹		Shear Stress dynes/cm²		Viscosity cP	
0.39	±0.01	0.80	±0.01	206.8	±4.9
0.78	0.01	1.34	0.01	172.5	3.1
1.94	0.03	2.74	0.01	140.9	2.2
3.89	0.06	3.72	0.01	95.8	1.5
7.77	0.12	4.84	0.01	62.3	0.9

Table B.76 Epping 64.0% W/O/W Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 40.00 ±0.10°C

Shear Rate sec⁻¹		Shear Stress dynes/cm²		Viscosity cP	
0.40	±0.01	0.50	±0.01	126.0	±3.4
0.80	0.01	0.65	0.01	80.9	1.7
2.00	0.03	0.81	0.01	40.6	0.8
3.99	0.06	1.16	0.01	29.0	0.5
7.99	0.13	1.75	0.01	21.9	0.4
15.97	0.26	2.74	0.01	17.2	0.3
39.93	0.64	5.34	0.01	13.4	0.2

Table B.77 Epping 64.0% W/O/W Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 59.80 ±0.10°C

Shear Rate sec⁻¹		Shear Stress dynes/cm²		Viscosity cP	
0.38	±0.01	0.09	±0.01	23.7	±2.0
0.76	0.01	0.16	0.01	20.7	1.0
1.90	0.02	0.30	0.01	16.0	0.4
3.80	0.03	0.46	0.01	12.1	0.2
7.61	0.07	0.77	0.01	10.2	0.1
15.21	0.13	1.34	0.01	8.8	0.1
38.04	0.33	2.80	0.01	7.4	0.1
76.07	0.67	4.43	0.01	5.8	0.1

Table B.78 Epping 66.8% W/O/W Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 21.60 ±0.10°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
0.20	±0.01	0.94	±0.02	461.9	±17.8
0.51	0.02	1.78	0.02	348.0	12.2
1.02	0.03	2.95	0.02	288.7	9.9
2.04	0.07	4.05	0.02	197.8	6.7
4.09	0.14	5.82	0.02	142.4	4.8
10.22	0.35	11.31	0.02	110.6	3.8
1.03	0.06	2.68	0.06	260.8	15.3
2.05	0.11	4.40	0.06	214.4	12.0
4.11	0.22	6.93	0.06	168.6	9.3
10.27	0.56	9.33	0.07	90.8	5.0
20.54	1.11	12.87	0.07	62.7	3.4

Table B.79 Epping 66.8% W/O/W Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 38.00 ±0.20°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
0.94	±0.01	0.88	±0.02	93.7	±2.1
1.88	0.03	1.46	0.02	77.8	1.4
3.76	0.05	2.26	0.02	60.0	0.9
9.41	0.13	4.12	0.02	43.8	0.6
18.82	0.26	6.85	0.02	36.4	0.5
8.61	0.01	3.88	0.06	45.0	0.7
17.23	0.01	6.16	0.06	35.7	0.4

Table B.80 Epping 66.8% W/O/W Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 59.70 ±0.20°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
0.79	±0.01	0.33	±0.01	42.0	±1.1
1.97	0.02	0.63	0.01	32.1	0.5
3.94	0.04	1.03	0.01	26.1	0.3
7.87	0.09	1.43	0.01	18.2	0.2
15.74	0.17	2.17	0.01	13.8	0.2
39.35	0.43	2.94	0.01	7.5	0.1
78.70	0.86	5.11	0.01	6.5	0.1

Table B.81 Epping 70.4% W/O/W Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 22.65 ±0.05°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
0.39	±0.01	0.75	±0.01	194.5	±4.2
0.77	0.01	1.08	0.01	139.6	2.1
1.93	0.02	2.04	0.01	105.6	1.2
3.86	0.04	3.54	0.01	91.6	1.0
7.72	0.08	4.91	0.01	63.6	0.7

Table B.82 Epping 70.4% W/O/W Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 39.75 ±0.10°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
0.39	±0.01	0.30	±0.01	76.1	±2.4
0.78	0.01	0.50	0.01	64.6	1.3
1.95	0.02	1.00	0.01	51.3	0.7
3.90	0.04	1.55	0.01	39.7	0.5
7.79	0.09	2.18	0.01	27.9	0.3
15.58	0.17	2.73	0.01	17.5	0.2
38.96	0.43	5.29	0.01	13.6	0.2

Table B.83 Epping 70.4% W/O/W Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 59.30 ±0.10°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
0.39	±0.01	0.16	±0.01	41.4	±2.1
0.78	0.01	0.24	0.01	31.3	1.0
1.95	0.02	0.47	0.01	24.3	0.4
3.90	0.04	0.73	0.01	18.7	0.3
7.79	0.07	1.09	0.01	14.0	0.2
15.58	0.14	1.48	0.01	9.5	0.1
38.95	0.35	2.66	0.01	6.8	0.1
77.90	0.69	4.41	0.01	5.7	0.1

Table B.84 Epping 70.4% W/O/W Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 75.50 ±0.10°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
0.39	±0.01	0.09	±0.01	23.3	±2.0
0.77	0.01	0.16	0.01	20.4	1.0
1.94	0.02	0.29	0.01	14.7	0.4
3.87	0.04	0.40	0.01	10.3	0.2
7.75	0.07	0.60	0.01	7.8	0.1
15.49	0.14	0.92	0.01	5.9	0.1
38.73	0.35	1.70	0.01	4.4	0.0
77.47	0.71	3.04	0.01	3.9	0.0

Table B.85 Epping 96.8% O/W Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 23.80 ±0.10°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
3.73	±0.04	0.08	±0.01	2.0	±0.2
7.46	0.08	0.11	0.01	1.4	0.1
14.91	0.17	0.19	0.01	1.3	0.1
37.28	0.41	0.47	0.01	1.3	0.0
74.56	0.83	0.94	0.01	1.3	0.0

Table B.86 Epping 96.8% O/W Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 39.00 ±0.20°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
3.77	±0.06	0.08	±0.01	2.0	±0.2
7.54	0.12	0.10	0.01	1.3	0.1
15.09	0.23	0.14	0.01	0.9	0.1
37.72	0.58	0.35	0.01	0.9	0.0
75.44	1.16	0.69	0.01	0.9	0.0

Table B.87 Epping 96.8% O/W Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 59.40 ±0.20°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
7.41	±0.10	0.08	±0.01	1.1	±0.1
14.82	0.21	0.12	0.01	0.8	0.1
37.05	0.52	0.29	0.01	0.8	0.0
74.10	1.03	0.66	0.01	0.9	0.0

Table B.88 Epping 96.8% O/W Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 75.40 ±0.20°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
7.39	±0.10	0.08	±0.01	1.0	±0.1
14.78	0.20	0.11	0.01	0.8	0.1
36.96	0.50	0.26	0.01	0.7	0.0
73.91	1.00	0.65	0.01	0.9	0.0

Table B.89 Epping 98.0% O/W Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 25.20 ±0.10°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
3.73	±0.04	0.07	±0.01	1.8	±0.[illegible]
7.47	0.08	0.10	0.01	1.4	0.1
14.93	0.15	0.18	0.01	1.2	0.1
37.33	0.38	0.44	0.01	1.2	0.0
74.66	0.76	0.85	0.01	1.1	0.0

Table B.90 Epping 98.0% O/W Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 39.70 ±0.20°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
3.76	±0.04	0.06	±0.01	1.6	±0.3
7.51	0.08	0.09	0.01	1.1	0.1
15.02	0.16	0.15	0.01	1.0	0.1
37.55	0.40	0.34	0.01	0.9	0.0
75.10	0.80	0.66	0.01	0.9	0.0

Table B.91 Epping 98.0% O/W Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 60.00 ±0.20°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
7.36	±0.08	0.06	±0.01	0.8	±0.2
14.73	0.15	0.12	0.01	0.8	0.1
36.82	0.38	0.26	0.01	0.7	0.0
73.64	0.77	0.62	0.01	0.8	0.0

Table B.92 Epping 98.0% O/W Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 74.50 ±0.20°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
7.33	±0.08	0.05	±0.01	0.7	±0.2
14.65	0.16	0.09	0.01	0.6	0.1
36.63	0.40	0.23	0.01	0.6	0.0
73.27	0.80	0.60	0.01	0.8	0.0

Table B.93 Epping 98.4% O/W Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 22.65 ±0.10°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
7.41	±0.07	0.10	±0.01	1.3	±0.1
14.81	0.13	0.18	0.01	1.2	0.1
37.03	0.34	0.43	0.01	1.2	0.0
74.06	0.67	0.84	0.01	1.1	0.0

Table B.94 Epping 98.4% O/W Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 39.75 ±0.10°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
7.41	±0.07	0.07	±0.01	1.0	±0.1
14.82	0.13	0.14	0.01	1.0	0.1
37.06	0.33	0.32	0.01	0.9	0.0
74.11	0.67	0.62	0.01	0.8	0.0

Table B.95 Epping 98.4% O/W Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 59.30 ±0.10°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
7.39	±0.09	0.07	±0.01	0.9	±0.1
14.78	0.18	0.12	0.01	0.8	0.1
36.95	0.44	0.25	0.01	0.7	0.0
73.90	0.88	0.62	0.01	0.8	0.0

Table B.96 Epping 98.4% O/W Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 75.60 ±0.10°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
7.38	±0.12	0.06	±0.01	0.9	±0.1
14.76	0.24	0.11	0.01	0.7	0.1
36.90	0.61	0.20	0.01	0.5	0.0
73.80	1.22	0.60	0.01	0.8	0.0

Table B.97 Primrose 3.6% (dried) W/O Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 22.00 ±0.10°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
0.06	±0.00	49.62	±0.33	80137.3	±1448.2
0.12	0.00	100.65	0.54	81271.4	889.4
0.33	0.01	233.54	2.35	71356.4	2296.9
0.65	0.02	472.56	4.35	72191.9	2296.5
1.31	0.04	945.66	8.50	72233.8	2291.1

Table B.98 Primrose 3.6% (dried) W/O Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 40.00 ±0.20°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
0.08	±0.01	11.55	±0.19	14357.1	±1472.9
0.16	0.02	17.61	0.19	10949.7	1105.3
0.40	0.04	39.90	0.22	9923.6	994.7
0.40	0.04	32.54	0.28	8121.3	830.6
0.80	0.08	62.50	0.38	7799.9	796.0
1.60	0.16	117.86	0.61	7354.4	750.1
1.60	0.16	142.20	1.67	8882.0	916.1
3.20	0.33	281.68	2.74	8796.6	905.4
8.01	0.82	702.82	6.36	8779.5	903.1

Table B.99 Primrose 3.6% (dried) W/O Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 59.60 ±0.50°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
0.14	±0.00	2.42	±0.02	1728.4	±33.5
0.35	0.01	5.57	0.02	1589.2	27.0
0.70	0.01	10.92	0.02	1557.8	25.9
0.30	0.07	8.56	0.19	2818.9	608.6
0.61	0.13	14.16	0.07	2332.2	501.0
1.21	0.26	25.80	0.09	2124.3	456.3
2.43	0.52	50.09	0.19	2062.2	443.0
1.35	0.03	33.24	0.49	2463.0	59.3
2.70	0.05	61.44	0.38	2276.5	45.2
6.75	0.13	149.81	0.76	2220.1	43.4

Table B.100 Primrose 22.8% W/O Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 23.80 ±0.10°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
0.06	±0.00	96.20	±0.52	156474.9	±2764.1
0.12	0.00	196.15	0.97	159520.9	1729.7
0.07	0.00	100.64	2.36	153128.8	9929.3
0.13	0.01	184.32	1.97	140229.4	8387.1
0.33	0.02	462.71	4.27	140811.8	8323.9
0.66	0.04	898.63	8.08	136733.9	8069.3

Table B.101 Primrose 22.8% W/O Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 44.80 ±0.20°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
0.07	±0.00	10.96	±0.07	16788.1	±305.9
0.13	0.00	21.37	0.09	16363.7	178.4
0.33	0.00	52.65	0.16	16127.9	123.5
0.13	0.01	24.46	0.26	18990.4	1354.2
0.32	0.02	57.82	0.36	17954.5	1264.0
0.64	0.05	96.55	0.52	14992.4	1053.6
1.29	0.09	167.60	0.84	13011.6	913.8
0.64	0.05	111.58	1.48	17380.0	1263.7
1.28	0.09	219.87	2.24	17124.4	1236.5
2.57	0.18	421.15	3.91	16400.2	1182.1
6.42	0.46	916.13	8.24	14270.3	1028.0

Table B.102 Primrose 22.8% W/O Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 54.20 ±0.20°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
0.06	±0.00	5.85	±0.06	9311.6	±259.2
0.13	0.00	12.44	0.07	9899.7	221.1
0.31	0.01	31.68	0.11	10085.9	207.9
0.63	0.01	60.53	0.18	9635.1	196.1
0.30	0.01	43.54	0.31	14438.2	292.1
0.60	0.01	82.86	0.46	13739.5	268.1
1.21	0.02	94.56	0.51	7840.1	152.3
1.24	0.03	98.45	1.40	7950.9	216.7
2.48	0.06	189.24	2.01	7641.7	195.2
6.19	0.14	449.04	4.15	7253.0	181.3
12.38	0.29	846.67	7.62	6837.8	170.3

Table B.103 Primrose 22.8% W/O Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 62.00 ±0.20°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
0.31	±0.00	15.95	±0.08	5191.8	±34.0
0.61	0.00	32.82	0.11	5342.2	26.2
0.64	0.08	29.73	0.27	4641.4	579.1
1.28	0.16	57.35	0.36	4476.9	557.7
2.56	0.32	110.25	0.58	4303.3	535.9
2.55	0.32	141.11	1.67	5526.1	702.9
6.38	0.81	317.23	3.03	4969.2	631.1
12.77	1.62	580.85	5.29	4549.3	577.6

Table B.104 Primrose 32.0% W/O Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 22.80 ±0.10°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
0.06	±0.00	122.52	±1.55	193848.6	±5830.6
0.13	0.00	251.59	2.49	199041.1	5089.8
0.32	0.01	609.29	5.54	192809.9	4663.5

Table B.105 Primrose 32.0% W/O Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 43.20 ±0.20°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
0.08	±0.00	17.86	±0.19	21585.2	±414.6
0.17	0.00	30.29	0.15	18310.2	172.2
0.16	0.00	30.43	0.49	18524.7	359.4
0.41	0.00	72.09	0.58	17555.7	199.2
0.82	0.01	138.10	0.81	16814.7	159.9
0.82	0.01	140.02	2.52	17061.1	332.9
1.64	0.01	257.06	3.17	15661.6	225.4
3.28	0.02	492.25	4.52	14995.1	176.9

Table B.106 Primrose 32.0% W/O Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 53.50 ±0.20°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
0.08	±0.01	9.85	±0.07	12216.7	±1113.0
0.16	0.01	15.21	0.13	9429.8	850.6
0.40	0.04	34.05	0.11	8444.8	756.3
0.40	0.04	36.28	0.50	9030.0	832.0
0.80	0.07	67.88	0.57	8447.4	772.5
1.61	0.15	127.57	0.77	7937.7	724.4

Table B.107 Primrose 32.0% W/O Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 64.00 ±0.30°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
0.14	±0.00	6.50	±0.06	4730.2	±119.7
0.34	0.01	14.29	0.07	4160.7	94.5
0.69	0.02	27.59	0.10	4017.3	89.4
1.37	0.03	54.49	0.19	3968.0	88.1
0.70	0.02	25.75	0.48	3666.7	123.1
1.40	0.04	83.80	0.62	5966.7	171.4
2.80	0.08	125.80	2.46	4487.6	154.3
7.01	0.20	289.88	2.80	4136.4	123.7
14.02	0.40	565.54	5.49	4035.0	120.7

Table B.108 Primrose 44.8% W/O/W Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 22.00 ±0.10°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
0.23	±0.02	20.94	±0.14	9160.4	±988.1
0.46	0.05	21.86	0.14	4782.3	511.6
1.14	0.12	29.56	0.15	2586.5	275.9
2.29	0.24	34.79	0.16	1522.3	162.3
4.57	0.49	45.57	0.18	996.9	106.2
0.17	0.03	14.04	0.47	8281.1	1328.0
0.34	0.05	18.26	0.48	5382.7	852.3
0.85	0.13	24.34	0.26	2870.8	448.9
1.70	0.26	30.66	0.28	1808.0	282.5
3.39	0.53	37.45	0.50	1104.2	172.9
6.78	1.06	49.16	0.52	724.6	113.3
16.96	2.65	72.56	0.58	427.9	66.8
33.92	5.29	102.76	0.86	303.0	47.3
10.22	3.49	76.57	5.51	748.9	260.9
25.56	8.71	86.42	2.32	338.1	115.6
51.12	17.43	103.92	5.55	203.3	70.1

Table B.109 Primrose 44.8% W/O/W Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 44.00 ±0.20°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
0.25	±0.03	13.85	±0.19	5498.7	±684.1
0.50	0.06	14.41	0.13	2859.3	352.3
1.26	0.15	17.49	0.19	1388.1	171.0
2.52	0.31	20.01	0.19	794.3	97.7
5.04	0.62	24.63	0.14	488.8	60.0
10.08	1.24	33.56	0.15	333.0	40.9
3.12	0.35	18.26	0.48	585.5	67.2
6.24	0.70	21.53	0.26	345.3	38.8
12.47	1.39	27.15	0.49	217.7	24.6
31.19	3.48	40.96	0.73	131.4	14.9
62.37	6.97	55.01	0.54	88.2	9.9

Table B.110 Primrose 44.8% W/O/W Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 56.00 ±0.20°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
0.21	±0.05	13.55	±0.31	6543.8	±1491.4
0.41	0.09	12.01	0.31	2900.1	660.7
1.04	0.23	14.16	0.19	1368.3	310.1
2.07	0.47	14.90	0.13	719.8	162.9
4.14	0.94	17.67	0.19	426.8	96.7
8.28	1.87	24.81	0.20	299.7	67.8
20.70	4.68	42.49	0.33	205.2	46.5
4.48	1.68	16.39	1.17	365.7	140.0
8.96	3.37	18.26	0.48	203.8	76.8
17.92	6.74	22.24	0.48	124.1	46.7
44.80	16.84	36.75	0.50	82.0	30.9
89.60	33.68	52.67	0.75	58.8	22.1

Table B.111 Primrose 44.8% W/O/W Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 63.50 ±0.50°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
0.17	±0.01	7.76	±0.13	4664.1	±162.8
0.42	0.01	14.47	0.19	3479.5	112.8
0.83	0.02	25.43	0.14	3057.6	91.9
1.66	0.05	44.03	0.22	2646.7	79.2
1.71	0.09	13.81	2.34	808.8	143.2
3.41	0.17	20.60	1.17	603.2	46.0
8.54	0.43	117.04	2.41	1370.9	75.1

Table B.112 Primrose 48.0% W/O/W Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 22.00 ±0.10°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
0.19	±0.02	28.09	±0.49	15015.6	±1660.1
0.37	0.04	32.30	0.49	8634.0	944.4
0.94	0.10	38.86	0.30	4154.3	450.1
1.87	0.20	45.64	0.52	2440.0	265.1
3.74	0.40	50.33	0.53	1345.2	146.0
7.48	0.81	64.60	0.56	863.4	93.6
18.71	2.02	109.31	0.70	584.4	63.2
37.41	4.04	160.34	0.90	428.6	46.4
5.99	0.14	60.16	5.50	1004.3	94.6
11.98	0.28	65.63	5.50	547.8	47.6
29.95	0.69	86.42	3.37	288.5	13.1
59.91	1.38	121.42	2.44	202.7	6.2

Table B.113 Primrose 48.0% W/O/W Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 43.50 ±0.10°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
0.36	±0.03	34.11	±0.32	9526.6	±848.3
0.72	0.06	36.64	0.32	5115.8	449.7
1.79	0.16	43.84	0.22	2448.7	213.8
3.58	0.31	50.37	0.34	1406.6	122.9
61.00	0.01	112.59	0.72	184.6	1.2
122.00	0.01	148.64	1.00	121.8	0.8

Table B.114 Primrose 48.0% W/O/W Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 52.00 ±0.20°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
0.22	±0.03	22.23	±0.31	9898.1	±1182.9
0.45	0.05	23.40	0.20	5209.5	615.6
1.12	0.13	29.37	0.20	2615.7	308.3
2.25	0.26	39.41	0.16	1754.8	206.5
4.49	0.53	47.66	0.33	1061.1	125.0
0.22	0.02	19.66	0.25	9085.0	763.9
0.43	0.04	22.70	0.26	5245.5	434.0
1.08	0.09	29.96	0.27	2768.8	227.4
2.16	0.18	38.62	0.50	1784.6	147.4
4.33	0.35	49.39	0.53	1141.0	93.9
8.66	0.71	60.86	0.55	703.0	57.7
21.64	1.77	89.65	0.64	414.2	33.9
43.28	3.53	111.42	0.88	257.4	21.1

Table B.115 Primrose 48.0% W/O/W Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 64.00 ±0.30°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
0.19	±0.03	17.49	±0.31	9044.2	±1201.6
0.39	0.05	16.99	0.19	4394.7	577.5
0.97	0.13	21.30	0.19	2203.7	288.8
1.93	0.25	28.92	0.15	1490.4	194.9
3.87	0.51	37.19	0.21	961.7	125.8
7.73	1.01	50.68	0.19	655.2	85.7
0.97	0.13	22.94	0.48	2372.8	314.2
1.93	0.25	30.90	0.49	1598.0	210.4
3.87	0.51	47.05	0.52	1216.7	159.6
7.73	1.01	62.50	0.56	808.1	105.9
19.34	2.53	95.03	0.65	491.5	64.3
38.67	5.05	117.04	1.30	302.6	39.7

Table B.116 Primrose 62.4% W/O/W Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 22.50 ±0.10°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
0.38	±0.01	3.72	±0.01	981.5	±17.9
0.76	0.01	6.26	0.01	824.2	9.8

Table B.117 Primrose 62.4% W/O/W Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 42.00 ±0.10°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
0.38	±0.01	1.78	±0.01	467.6	± 8.7
0.76	0.01	2.98	0.01	391.7	4.7
1.90	0.02	5.77	0.01	303.3	2.9

Table B.118 Primrose 62.4% W/O/W Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 56.00 ±0.20°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
0.40	±0.02	0.87	±0.01	218.1	± 9.9
0.80	0.03	1.53	0.01	191.8	8.1
2.00	0.08	3.04	0.01	152.3	6.3
3.99	0.17	2.43	0.01	60.7	2.5
7.99	0.33	3.70	0.01	46.4	1.9

Table B.119 Primrose 62.4% W/O/W Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 66.00 ±0.30°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
1.86	±0.02	0.81	±0.01	43.7	± 0.6
3.73	0.04	1.57	0.01	42.1	0.5
7.46	0.07	2.94	0.01	39.4	0.4
14.91	0.14	5.00	0.01	33.5	0.3

Table B.120 Primrose 64.4% W/O/W Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 22.80 ±0.10°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
2.67	±0.03	1.52	±0.02	56.8	± 0.9
6.68	0.08	3.82	0.02	57.2	0.7
13.37	0.16	7.44	0.02	55.6	0.7
1.84	0.02	0.95	0.01	51.8	0.6
3.69	0.03	1.95	0.01	53.0	0.5
7.37	0.07	3.98	0.01	54.0	0.5

Table B.121 Primrose 64.4% W/O/W Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 44.50 ±0.10°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
1.85	±0.02	0.68	±0.01	36.5	± 0.6
3.70	0.04	1.14	0.01	30.8	0.4
7.40	0.07	2.31	0.01	31.2	0.3
14.81	0.15	4.68	0.01	31.6	0.3

Table B.122 Primrose 64.4% W/O/W Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 55.00 ±0.20°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
3.68	±0.03	0.81	±0.01	22.0	± 0.3
7.36	0.07	1.64	0.01	22.2	0.2
14.72	0.13	3.26	0.01	22.1	0.2

Table B.123 Primrose 64.4% W/O/W Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 64.50 ±0.30°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
7.46	±0.08	1.14	±0.01	15.3	± 0.2
14.91	0.17	2.28	0.01	15.3	0.2
37.28	0.42	4.70	0.02	12.6	0.2

Table B.124 Primrose 78.5% O/W Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 23.50 ±0.10°C

Shear Rate sec^{-1}	Shear Stress $dynes/cm^2$	Viscosity cP
14.77 ±0.13	0.50 ±0.01	3.4 ± 0.1
36.93 0.33	1.18 0.01	3.2 0.0
73.87 0.66	2.35 0.01	3.2 0.0

Table B.125 Primrose 78.5% O/W Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 41.50 ±0.10°C

Shear Rate sec^{-1}	Shear Stress $dynes/cm^2$	Viscosity cP
14.78 ±0.13	0.36 ±0.02	2.4 ± 0.1
36.94 0.33	0.87 0.01	2.4 0.0
73.88 0.66	1.68 0.01	2.3 0.0

Table B.126 Primrose 78.5% O/W Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 51.50 ±0.20°C

Shear Rate sec^{-1}	Shear Stress $dynes/cm^2$	Viscosity cP
14.79 ±0.13	0.31 ±0.02	2.1 ± 0.1
36.98 0.33	0.73 0.01	2.0 0.0
73.95 0.66	1.43 0.01	1.9 0.0

Table B.127 Primrose 78.5% O/W Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 60.50 ±0.30°C

Shear Rate sec^{-1}	Shear Stress $dynes/cm^2$	Viscosity cP
36.87 ±0.33	0.64 ±0.01	1.7 ± 0.0
73.75 0.66	1.26 0.01	1.7 0.0

Table B.128 Primrose 82.4% O/W Emulsion Rheology

Brookfield Sychrolectric LVTD
Temperature: 23.00 ±0.10°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
7.36	±0.07	0.59	±0.01	8.0	± 0.1
14.72	0.13	1.16	0.01	7.9	0.1
36.79	0.33	2.92	0.01	7.9	0.1
73.59	0.66	5.93	0.01	8.1	0.1

Table B.129 Primrose 82.4% O/W Emulsion Rheology

Brookfield Sychrolectric LVTD
Temperature: 41.50 ±0.10°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
7.39	±0.07	0.41	±0.01	5.6	± 0.1
14.77	0.14	0.82	0.01	5.5	0.1
36.93	0.34	2.07	0.01	5.6	0.1
73.85	0.67	3.77	0.01	5.1	0.0

Table B.130 Primrose 82.4% O/W Emulsion Rheology

Brookfield Sychrolectric LVTD
Temperature: 50.10 ±0.20°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
14.88	±0.18	0.65	±0.01	4.3	± 0.1
37.21	0.45	1.61	0.01	4.3	0.1
74.41	0.90	2.68	0.01	3.6	0.0

Table B.131 Primrose 82.4% O/W Emulsion Rheology

Brookfield Sychrolectric LVTD
Temperature: 60.00 ±0.20°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
14.76	±0.13	0.45	±0.01	3.1	± 0.1
36.91	0.33	1.07	0.01	2.9	0.0
73.81	0.67	2.16	0.01	2.9	0.0

Table B.132 Primrose 88.8% O/W Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 22.00 ±0.10°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
3.71	±0.03	0.14	±0.02	3.7	± 0.4
7.42	0.07	0.24	0.01	3.2	0.1
14.84	0.14	0.46	0.01	3.1	0.1
37.09	0.34	1.08	0.01	2.9	0.0
74.18	0.68	2.18	0.01	2.9	0.0

Table B.133 Primrose 88.8% O/W Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 44.00 ±0.10°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
3.72	±0.03	0.09	±0.02	2.5	± 0.4
7.43	0.07	0.17	0.01	2.2	0.1
14.86	0.13	0.31	0.01	2.1	0.1
37.15	0.34	0.71	0.01	1.9	0.0
74.31	0.67	1.42	0.01	1.9	0.0

Table B.134 Primrose 88.8% O/W Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 51.00 ±0.10°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
3.73	±0.03	0.09	±0.02	2.4	± 0.4
7.45	0.07	0.16	0.01	2.1	0.1
14.91	0.14	0.28	0.01	1.9	0.1
37.26	0.34	0.63	0.01	1.7	0.0
74.53	0.69	1.27	0.01	1.7	0.0

Table B.135 Primrose 88.8% O/W Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 60.00 ±0.10°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
3.74	±0.04	0.08	±0.02	2.0	± 0.4
7.48	0.07	0.13	0.01	1.7	0.1
14.95	0.14	0.22	0.01	1.5	0.1
37.38	0.35	0.50	0.01	1.3	0.0
74.76	0.70	0.97	0.01	1.3	0.0

Table B.136 Primrose 95.2% O/W Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 22.80 ±0.10°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
3.71	±0.03	0.13	±0.02	3.4	± 0.4
7.42	0.07	0.23	0.01	3.0	0.1
14.85	0.13	0.42	0.01	2.8	0.1
37.12	0.34	0.98	0.01	2.6	0.0
74.25	0.67	1.97	0.01	2.6	0.0

Table B.137 Primrose 95.2% O/W Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 45.00 ±0.10°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
3.73	±0.04	0.09	±0.02	2.4	± 0.4
7.45	0.07	0.15	0.01	2.0	0.1
14.90	0.14	0.27	0.01	1.8	0.1
37.26	0.35	0.62	0.01	1.7	0.0
74.52	0.70	1.25	0.01	1.7	0.0

Table B.138 Primrose 95.2% O/W Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 55.00 ±0.20°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
3.73	±0.04	0.08	±0.02	2.2	± 0.4
7.46	0.07	0.13	0.01	1.8	0.1
14.92	0.15	0.23	0.01	1.5	0.1
37.30	0.37	0.55	0.01	1.5	0.0
74.59	0.75	1.09	0.01	1.5	0.0

Table B.139 Primrose 95.2% O/W Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 65.00 ±0.20°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
3.75	±0.04	0.08	±0.02	2.0	± 0.4
7.49	0.08	0.11	0.01	1.5	0.1
14.98	0.15	0.20	0.01	1.3	0.1
37.45	0.39	0.45	0.01	1.2	0.0
74.90	0.77	0.89	0.01	1.2	0.0

Table B.140 Primrose 98.6% O/W Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 23.00 ±0.10°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
14.71	±0.13	0.17	±0.02	1.1	± 0.1
36.79	0.33	0.42	0.01	1.1	0.0
73.57	0.66	0.84	0.01	1.1	0.0

Table B.141 Primrose 98.6% O/W Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 45.00 ±0.10°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
14.61	±0.13	0.11	±0.02	0.7	± 0.2
36.53	0.33	0.29	0.02	0.8	0.0
73.07	0.67	0.61	0.01	0.8	0.0

Table B.142 Primrose 98.6% O/W Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 55.00 ±0.20°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
36.01	±0.33	0.24	±0.01	0.7	± 0.0
72.02	0.66	0.60	0.01	0.8	0.0

Table B.143 Primrose 98.6% O/W Emulsion Rheology

Brookfield Synchrolectric LVTD
Temperature: 64.20 ±0.20°C

Shear Rate sec^{-1}		Shear Stress $dynes/cm^2$		Viscosity cP	
35.96	±0.33	0.23	±0.01	0.6	± 0.0
71.91	0.66	0.59	0.01	0.8	0.0

Appendix C

Droplet Size Distribution Data
for Emulsions of Wainwright B, Epping, and Primrose
Dewatered Crude Oils

Table C.1 Wainwright B 0.8% W/O Emulsion
Primary Distribution

Particle size range (microns)	Number frequency in range	Percentage in range	Percentage per micron	Cumulative percentage less than
0.7 - 1.2	3	16.7	34.2	16.7
1.2 - 1.9	7	38.9	53.2	55.6
1.9 - 3.0	4	22.2	20.3	77.8
3.0 - 3.7	2	11.1	18.3	88.9
3.7 - 3.9	2	1.1	45.6	100.0
	18			

Geometric mean particle size: 1.9 microns
Dispersity: 1.6

Table C.2 Wainwright B 4.8% W/O Emulsion
Primary Distribution

Particle size range (microns)	Number frequency in range	Percentage in range	Percentage per micron	Cumulative percentage less than
0.0 - 0.5	3	3.3	6.8	3.3
0.5 - 0.7	3	3.3	13.7	6.7
0.7 - 1.0	5	5.6	22.8	12.2
1.0 - 1.2	12	13.3	54.8	25.6
1.2 - 1.7	19	21.1	43.3	46.7
1.7 - 1.9	13	14.4	59.3	61.1
1.9 - 2.3	7	7.8	21.3	68.9
2.3 - 2.4	7	7.8	63.9	76.7
2.4 - 2.9	6	6.7	13.7	83.3
2.9 - 3.2	6	6.7	27.4	90.0
3.4 - 3.9	4	4.4	9.1	94.4
3.9 - 4.4	3	3.3	6.8	97.8
4.4 - 4.6	2	2.2	9.1	100.0
	90			

Geometric mean particle size: 1.7 microns
Dispersity: 1.8

Table C.3 Wainwright B 10.4% W/O Emulsion
Primary Distribution

Particle size range (microns)	Number frequency in range	Percentage in range	Percentage per micron	Cumulative percentage less than
0.0 - 0.2	5	1.3	5.3	1.3
0.2 - 0.5	16	4.2	17.1	5.5
0.5 - 0.7	60	15.6	64.2	21.1
0.7 - 1.0	86	22.4	92.0	43.5
1.0 - 1.2	89	23.2	95.2	66.7
1.2 - 1.5	51	13.3	54.5	79.9
1.5 - 1.7	25	6.5	26.7	86.5
1.7 - 2.3	29	7.6	12.4	94.0
2.3 - 2.4	8	2.1	17.1	96.1
2.4 - 2.7	8	2.1	8.6	98.2
2.7 - 3.2	4	1.0	2.1	99.2
3.4 - 3.7	2	0.5	2.1	99.7
3.9 - 4.1	1	0.3	1.1	100.0
	384			

Geometric mean particle size: 1.0 microns
Dispersity: 1.7

Table C.4 Wainwright B 18.0% W/O Emulsion
Primary Distribution

Particle size range (microns)	Number frequency in range	Percentage in range	Percentage per micron	Cumulative percentage less than
0.2 - 0.5	2	1.7	7.1	1.7
0.5 - 0.7	8	6.9	28.3	8.6
0.7 - 1.0	13	11.2	46.0	19.8
1.0 - 1.2	12	10.3	42.5	30.2
1.2 - 1.8	15	12.9	21.2	43.1
1.8 - 2.4	17	14.7	24.1	57.8
2.4 - 3.0	10	8.6	14.2	66.4
3.0 - 3.7	17	14.7	24.1	81.0
3.7 - 4.9	8	6.9	5.7	87.9
4.9 - 6.1	7	6.0	5.0	94.0
6.7 - 7.3	2	1.7	2.8	95.7
7.3 - 7.9	2	1.7	2.8	97.4
9.1 - 9.7	1	0.9	1.4	98.3
9.7 - 10.3	2	1.7	2.8	100.0
	116			

Geometric mean particle size: 2.0 microns
Dispersity: 2.1

Table C.5 Wainwright B 26.5% W/O Emulsion
Primary Distribution

Particle size range (microns)	Number frequency in range	Percentage in range	Percentage per micron	Cumulative percentage less than
0.0 - 0.2	5	3.0	12.2	3.0
0.2 - 0.6	13	7.7	21.2	10.7
0.6 - 0.7	25	14.9	122.2	25.6
0.7 - 1.0	12	7.1	29.3	32.7
1.0 - 1.2	17	10.1	41.6	42.9
1.2 - 1.7	15	8.9	18.3	51.8
1.7 - 1.9	10	6.0	24.4	57.7
1.9 - 2.4	19	11.3	23.2	69.0
2.4 - 3.0	13	7.7	12.7	76.8
3.0 - 3.7	11	6.5	10.8	83.3
3.7 - 4.3	4	2.4	3.9	85.7
4.3 - 4.9	5	3.0	4.9	88.7
4.9 - 5.5	5	3.0	4.9	91.7
5.5 - 6.7	4	2.4	2.0	94.0
6.7 - 7.3	4	2.4	3.9	96.4
7.3 - 8.6	3	1.8	1.3	98.2
8.6 - 9.7	1	0.6	0.5	98.8
9.7 - 10.3	2	1.2	2.0	100.0
	168			

Geometric mean particle size: 1.5 microns
Dispersity: 2.5

Table C.6 Wainwright B 28.0% W/O/W Emulsion
Primary Distribution

Particle size range (microns)	Number frequency in range	Percentage in range	Percentage per micron	Cumulative percentage less than
0.6 - 1.2	1	2.8	4.6	2.8
1.2 - 1.8	1	2.8	4.6	5.6
1.8 - 2.4	3	8.3	13.7	13.9
2.4 - 3.0	3	8.3	13.7	22.2
3.0 - 3.7	4	11.1	18.3	33.3
3.7 - 5.5	6	16.7	9.1	50.0
5.5 - 6.1	5	13.9	22.8	63.9
6.1 - 6.7	3	8.3	13.7	72.2
6.7 - 7.3	4	11.1	18.3	83.3
8.5 - 11.0	4	11.1	4.6	94.4
14.6 - 17.0	1	2.8	1.1	97.2
48.7 - 51.3	1	2.8	1.1	100.0
	36			

Geometric mean particle size: 4.9 microns
Dispersity: 2.0

Table C.7 Wainwright B 28.0% W/O/W Emulsion
Secondary Distribution

Particle size range (microns)	Number frequency in range	Percentage in range	Percentage per micron	Cumulative percentage less than
0.0 - 2.4	1	8.3	3.4	8.3
2.4 - 4.9	4	33.3	13.7	41.7
4.9 - 7.3	3	25.0	10.3	66.7
7.3 - 9.7	1	8.3	3.4	75.0
9.7 - 12.2	1	8.3	3.4	83.3
14.6 - 17.0	1	8.3	3.4	91.7
19.5 - 21.9	1	8.3	3.4	100.0
	12			

Geometric mean particle size: 5.8 microns
Dispersity: 2.2

Table C.8 Wainwright B 34.4% W/O/W Emulsion
Primary Distribution

Particle size range (microns)	Number frequency in range	Percentage in range	Percentage per micron	Cumulative percentage less than
0.2 - 1.2	4	10.5	10.8	10.5
1.7 - 2.4	5	13.2	18.0	23.7
2.4 - 6.1	8	21.1	5.8	44.7
6.7 - 12.2	7	18.4	3.4	63.2
12.2 - 18.3	6	15.8	2.6	78.9
18.3 - 24.4	4	10.5	1.7	89.5
31.0 - 36.5	3	7.9	1.4	97.4
36.5 - 42.6	1	2.6	0.4	100.0
	38			

Geometric mean particle size: 6.7 microns
Dispersity: 3.2

Table C.9 Wainwright B 34.4% W/O/W Emulsion
Secondary Distribution

Particle size range (microns)	Number frequency in range	Percentage in range	Percentage per micron	Cumulative percentage less than
0.0 - 0.7	14	35.9	49.1	35.9
0.7 - 1.0	11	28.2	115.8	64.1
1.0 - 1.2	6	15.4	63.2	79.5
1.5 - 1.7	3	7.7	31.6	87.2
1.7 - 1.9	1	2.6	10.5	89.7
1.9 - 2.2	1	2.6	10.5	92.3
2.2 - 2.4	1	2.6	10.5	94.9
2.4 - 2.8	1	2.6	7.0	97.4
3.4 - 3.7	1	2.6	10.5	100.0
	39			

Geometric mean particle size: 0.8 microns
Dispersity: 1.9

Table C.10 Wainwright B 46.4% W/O/W Emulsion
Primary Distribution

Particle size range (microns)	Number frequency in range	Percentage in range	Percentage per micron	Cumulative percentage less than
1.0 - 1.8	5	12.2	14.3	12.2
1.8 - 4.3	11	26.8	11.0	39.0
4.3 - 5.5	6	14.6	12.0	53.7
5.5 - 9.9	7	17.1	3.9	70.7
9.9 - 12.2	3	7.3	3.2	78.0
12.2 - 14.6	2	4.9	2.0	82.9
19.5 - 24.4	3	7.3	1.5	90.2
30.4 - 36.5	3	7.3	1.2	97.6
36.5 - 42.6	1	2.4	0.4	100.0
	41			

Geometric mean particle size: 6.0 microns
Dispersity: 2.6

Table C.11 Wainwright B 46.4% W/O/W Emulsion
Secondary Distribution

Particle size range (microns)	Number frequency in range	Percentage in range	Percentage per micron	Cumulative percentage less than
0.5 - 1.0	6	11.5	23.7	11.5
1.0 - 1.5	5	9.6	19.7	21.2
1.5 - 1.9	8	15.4	31.6	36.5
1.9 - 2.4	9	17.3	35.5	53.8
2.4 - 2.9	7	13.5	27.6	67.3
2.9 - 3.4	7	13.5	27.6	80.8
3.4 - 3.9	6	11.5	23.7	92.3
3.9 - 4.4	1	1.9	3.9	94.2
4.4 - 4.9	2	3.8	7.9	98.1
7.8 - 8.3	1	1.9	3.9	100.0
	52			

Geometric mean particle size: 2.1 microns
Dispersity: 1.7

Table C.12 Wainwright B 54.0% W/O/W Emulsion
Primary Distribution

Particle size range (microns)	Number frequency in range	Percentage in range	Percentage per micron	Cumulative percentage less than
0.0 - 0.2	2	3.6	14.9	3.6
0.2 - 0.5	6	10.9	44.8	14.5
0.7 - 1.7	8	14.5	14.9	29.1
1.7 - 6.1	7	12.7	2.9	41.8
6.1 - 8.5	7	12.7	5.2	54.5
8.5 - 11.0	7	12.7	5.2	67.3
11.0 - 12.2	6	10.9	9.0	78.2
12.2 - 13.4	2	3.6	3.0	81.8
13.4 - 18.3	3	5.5	1.1	87.3
18.3 - 19.5	2	3.6	3.0	90.9
19.5 - 24.4	2	3.6	0.7	94.5
36.5 - 42.6	2	3.6	0.6	98.2
42.6 - 48.5	1	1.8	0.3	100.0
	55			

Geometric mean particle size: 4.4 microns
Dispersity: 4.4

Table C.13 Wainwright B 54.0% W/O/W Emulsion
Secondary Distribution

Particle size range (microns)	Number frequency in range	Percentage in range	Percentage per micron	Cumulative percentage less than
0.5 - 1.0	5	8.1	16.6	8.1
1.0 - 1.5	10	16.1	33.1	24.2
1.5 - 1.9	10	16.1	33.1	40.3
1.9 - 2.4	18	29.0	59.6	69.4
2.4 - 2.9	6	9.7	19.9	79.0
2.9 - 3.4	4	6.5	13.2	85.5
3.4 - 3.9	5	8.1	16.6	93.5
3.9 - 4.4	3	4.8	9.9	98.4
4.4 - 4.7	1	1.6	4.4	100.0
	62			

Geometric mean particle size: 2.0 microns
Dispersity: 1.6

Table C.14 Wainwright B 95.6% O/W Emulsion
Primary Distribution

Particle size range (microns)	Number frequency in range	Percentage in range	Percentage per micron	Cumulative percentage less than
0.0 - 0.2	15	2.0	8.3	2.0
0.2 - 0.6	31	4.2	11.5	6.2
0.6 - 0.7	83	11.2	92.0	17.4
0.7 - 1.0	98	13.2	54.3	30.6
1.0 - 1.3	86	11.6	31.8	42.2
1.3 - 1.6	100	13.5	55.4	55.7
1.6 - 1.7	48	6.5	53.2	62.2
1.7 - 1.9	51	6.9	28.3	69.1
1.9 - 2.2	63	8.5	34.9	77.6
2.2 - 2.4	23	3.1	12.7	80.7
2.4 - 2.7	22	3.0	12.2	83.7
2.7 - 2.9	27	3.6	15.0	87.3
2.9 - 3.2	17	2.3	9.4	89.6
3.2 - 3.4	9	1.2	5.0	90.8
3.4 - 3.7	14	1.9	7.8	92.7
3.7 - 3.9	16	2.2	8.9	94.9
3.9 - 4.1	6	0.8	3.3	95.7
4.1 - 4.4	7	0.9	3.9	96.6
4.4 - 4.6	5	0.7	2.8	97.3
4.6 - 4.9	4	0.5	2.2	97.8
4.9 - 5.1	4	0.5	2.2	98.4
5.1 - 5.4	5	0.7	2.8	99.1
5.4 - 6.6	3	0.4	0.3	99.5
6.6 - 6.8	2	0.3	1.1	99.7
7.3 - 8.5	1	0.1	0.1	99.9
8.5 - 9.1	1	0.1	0.2	100.0
	741			

Geometric mean particle size: 1.4 microns
Dispersity: 2.0

Table C.15 Wainwright B 97.6% O/W Emulsion
Primary Distribution

Particle size range (microns)	Number frequency in range	Percentage in range	Percentage per micron	Cumulative percentage less than
0.0 - 0.1	5	2.4	20.0	2.4
0.1 - 0.5	14	6.8	18.7	9.3
0.5 - 0.7	22	10.7	44.1	20.0
0.7 - 1.0	27	13.2	54.1	33.2
1.0 - 1.2	32	15.6	64.1	48.8
1.2 - 1.5	28	13.7	56.1	62.4
1.5 - 1.7	23	11.2	46.1	73.7
1.7 - 2.1	23	11.2	30.7	84.9
2.1 - 2.2	10	4.9	40.1	89.8
2.2 - 2.7	10	4.9	10.0	94.6
2.7 - 3.4	9	4.4	6.0	99.0
3.4 - 4.1	1	0.5	0.7	99.5
4.1 - 4.4	1	0.5	2.0	100.0
	205			

Geometric mean particle size: 1.1 microns
Dispersity: 2.1

Table C.16 Epping 0.9% W/O Emulsion
Primary Distribution

Particle size range (microns)	Number frequency in range	Percentage in range	Percentage per micron	Cumulative percentage less than
0.0 - 0.5	1	0.6	1.3	0.6
0.5 - 0.7	42	26.8	109.9	27.4
0.7 - 1.0	35	22.3	91.5	49.7
1.0 - 1.2	17	10.8	44.5	60.5
1.2 - 1.5	15	9.6	39.2	70.1
1.5 - 1.7	11	7.0	28.8	77.1
1.7 - 1.9	10	6.4	26.2	83.4
1.9 - 2.2	10	6.4	26.2	89.8
2.2 - 2.4	8	5.1	20.9	94.9
2.4 - 2.7	3	1.9	7.8	96.8
2.7 - 3.2	3	1.9	3.9	98.7
3.2 - 4.1	2	1.3	1.3	100.0
	157			

Geometric mean particle size: 1.1 microns
Dispersity: 1.7

Table C.17 Epping 14.4% W/O Emulsion
Primary Distribution

Particle size range (microns)	Number frequency in range	Percentage in range	Percentage per micron	Cumulative percentage less than
0.0 - 0.1	44	6.3	51.3	6.3
0.1 - 0.2	39	5.5	45.5	11.8
0.2 - 0.4	122	17.3	142.3	29.1
0.4 - 0.5	72	10.2	84.0	39.3
0.5 - 0.6	122	17.3	142.3	56.7
0.6 - 0.7	126	17.9	147.0	74.6
0.7 - 0.9	111	15.8	129.5	90.3
0.9 - 1.0	32	4.5	37.3	94.9
1.0 - 1.1	26	3.7	30.3	98.6
1.1 - 1.2	8	1.1	9.3	99.7
1.2 - 1.5	2	0.3	1.2	100.0
	704			

Geometric mean particle size: 0.5 microns
Dispersity: 2.0

Table C.18 Epping 17.0% W/O Emulsion
Primary Distribution

Particle size range (microns)	Number frequency in range	Percentage in range	Percentage per micron	Cumulative percentage less than
0.0 - 0.2	1	0.3	1.1	0.3
0.2 - 0.5	65	16.8	68.8	17.0
0.5 - 0.7	192	49.5	203.2	66.5
0.7 - 1.0	44	11.3	46.6	77.8
1.0 - 1.2	19	4.9	20.1	82.7
1.2 - 1.5	7	1.8	7.4	84.5
1.5 - 1.7	14	3.6	14.8	88.1
1.7 - 1.9	7	1.8	7.4	89.9
1.9 - 2.2	6	1.5	6.4	91.5
2.2 - 2.4	6	1.5	6.4	93.0
2.7 - 2.9	10	2.6	10.6	95.6
2.9 - 3.2	4	1.0	4.2	96.6
3.2 - 3.7	4	1.0	2.1	97.7
3.7 - 4.1	4	1.0	2.1	98.7
4.1 - 5.8	4	1.0	0.6	99.7
6.3 - 6.6	1	0.3	1.1	100.0
	388			

Geometric mean particle size: 0.7 microns
Dispersity: 1.8

Table C.19 Epping 20.0% W/O Emulsion
Primary Distribution

Particle size range (microns)	Number frequency in range	Percentage in range	Percentage per micron	Cumulative percentage less than
0.2 - 0.5	27	10.5	43.1	10.5
0.5 - 0.7	119	46.3	190.1	56.8
0.7 - 1.0	35	13.6	55.9	70.4
1.0 - 1.2	15	5.8	24.0	76.3
1.2 - 1.5	15	5.8	24.0	82.1
1.5 - 1.7	13	5.1	20.8	87.2
1.7 - 1.9	8	3.1	12.8	90.3
1.9 - 2.2	10	3.9	16.0	94.2
2.2 - 2.4	3	1.2	4.8	95.3
2.7 - 2.9	5	1.9	8.0	97.3
3.2 - 3.4	3	1.2	4.8	98.4
3.4 - 4.4	3	1.2	1.2	99.6
4.4 - 4.6	1	0.4	1.6	100.0
	257			

Geometric mean particle size: 0.8 microns
Dispersity: 1.7

Table C.20 Epping 20.4% W/O Emulsion
Primary Distribution

Particle size range (microns)	Number frequency in range	Percentage in range	Percentage per micron	Cumulative percentage less than
0.0 - 0.2	2	0.4	1.8	0.4
0.2 - 0.5	108	23.9	98.3	24.4
0.5 - 0.7	213	47.2	193.9	71.6
0.7 - 1.0	53	11.8	48.3	83.4
1.0 - 1.2	27	6.0	24.6	89.4
1.2 - 1.5	12	2.7	10.9	92.0
1.5 - 1.7	18	4.0	16.4	96.0
1.7 - 1.9	9	2.0	8.2	98.0
1.9 - 2.2	5	1.1	4.6	99.1
2.2 - 2.4	2	0.4	1.8	99.6
2.4 - 2.7	1	0.2	0.9	99.8
2.9 - 3.2	1	0.2	0.9	100.0
	451			

Geometric mean particle size: 0.6 microns
Dispersity: 1.6

Table C.21 Epping 43.2% W/O/W Emulsion
Primary Distribution

Particle size range (microns)	Number frequency in range	Percentage in range	Percentage per micron	Cumulative percentage less than
1.2 - 2.4	4	8.9	7.3	8.9
2.4 - 4.9	5	11.1	4.6	20.0
4.9 - 8.5	4	8.9	2.4	28.9
8.5 - 9.7	4	8.9	7.3	37.8
9.7 - 10.3	4	8.9	14.6	46.7
10.3 - 11.0	5	11.1	18.3	57.8
11.0 - 12.2	6	13.3	11.0	71.1
12.2 - 13.4	3	6.7	5.5	77.8
13.4 - 15.2	4	8.9	4.9	86.7
15.2 - 16.4	3	6.7	5.5	93.3
16.4 - 19.5	2	4.4	1.5	97.8
19.5 - 42.6	1	2.2	0.1	100.0
	45			

Geometric mean particle size: 8.6 microns
Dispersity: 2.0

Table C.22 Epping 43.2% W/O/W Emulsion
Secondary Distribution

Particle size range (microns)	Number frequency in range	Percentage in range	Percentage per micron	Cumulative percentage less than
0.2 - 0.5	2	6.1	24.9	6.1
0.5 - 0.7	11	33.3	136.9	39.4
0.7 - 1.0	6	18.2	74.7	57.6
1.0 - 1.5	2	6.1	12.4	63.6
1.5 - 1.7	6	18.2	74.7	81.8
1.7 - 2.4	3	9.1	12.4	90.9
2.4 - 2.9	1	3.0	6.2	93.9
2.9 - 3.2	1	3.0	12.4	97.0
4.1 - 4.4	1	3.0	12.4	100.0
	33			

Geometric mean particle size: 1.0 microns
Dispersity: 1.9

Table C.23 Epping 53.2% W/O/W Emulsion
Primary Distribution

Particle size range (microns)	Number frequency in range	Percentage in range	Percentage per micron	Cumulative percentage less than
0.0 - 0.6	30	11.3	18.6	11.3
0.6 - 1.2	93	35.1	57.6	46.4
1.2 - 1.8	32	12.1	19.8	58.5
1.8 - 2.4	26	9.8	16.1	68.3
2.4 - 3.0	17	6.4	10.5	74.7
3.0 - 3.7	9	3.4	5.6	78.1
3.7 - 4.3	8	3.0	5.0	81.1
4.3 - 6.7	22	8.3	3.4	89.4
6.7 - 7.3	5	1.9	3.1	91.3
7.3 - 8.5	6	2.3	1.9	93.6
8.5 - 9.7	4	1.5	1.2	95.1
9.7 - 11.0	1	0.4	0.3	95.5
11.0 - 12.2	5	1.9	1.5	97.4
14.0 - 15.8	4	1.5	0.8	98.9
21.9 - 31.7	2	0.8	0.1	99.6
31.7 - 32.3	1	0.4	0.6	100.0
	265			

Geometric mean particle size: 1.6 microns
Dispersity: 2.7

Table C.24 Epping 53.2% W/O/W Emulsion
Secondary Distribution

Particle size range (microns)	Number frequency in range	Percentage in range	Percentage per micron	Cumulative percentage less than
0.0 - 0.2	3	12.5	51.3	12.5
0.2 - 0.5	5	20.8	85.6	33.3
0.5 - 0.7	3	12.5	51.3	45.8
0.7 - 1.0	4	16.7	68.4	62.5
1.0 - 1.2	4	16.7	68.4	79.2
1.2 - 2.2	3	12.5	12.8	91.7
2.2 - 2.6	2	8.3	22.8	100.0
	24			

Geometric mean particle size: 0.7 microns
Dispersity: 2.4

Table C.25 Epping 64.0% W/O/W Emulsion
Primary Distribution

Particle size range (microns)	Number frequency in range	Percentage in range	Percentage per micron	Cumulative percentage less than
0.0 - 0.6	3	1.5	2.5	1.5
0.6 - 1.2	39	19.9	32.7	21.4
1.2 - 1.8	45	23.0	37.7	44.4
1.8 - 2.4	29	14.8	24.3	59.2
2.4 - 3.0	19	9.7	15.9	68.9
3.0 - 3.7	10	5.1	8.4	74.0
3.7 - 4.3	9	4.6	7.5	78.6
4.3 - 4.9	9	4.6	7.5	83.2
4.9 - 5.5	4	2.0	3.4	85.2
5.5 - 6.1	3	1.5	2.5	86.7
6.1 - 7.3	5	2.6	2.1	89.3
7.3 - 9.7	5	2.6	1.0	91.8
9.7 - 11.0	3	1.5	1.3	93.4
11.0 - 20.7	5	2.6	0.3	95.9
20.7 - 22.5	4	2.0	1.1	98.0
22.5 - 24.4	2	1.0	0.6	99.0
24.4 - 44.4	2	1.0	0.1	100.0
	196			

Geometric mean particle size: 2.4 microns
Dispersity: 2.4

Table C.26 Epping 64.0% W/O/W Emulsion
Secondary Distribution

Particle size range (microns)	Number frequency in range	Percentage in range	Percentage per micron	Cumulative percentage less than
0.5 - 1.0	5	9.1	18.7	9.1
1.0 - 1.5	13	23.6	48.5	32.7
1.5 - 1.9	8	14.5	29.9	47.3
1.9 - 2.4	8	14.5	29.9	61.8
2.4 - 2.9	3	5.5	11.2	67.3
2.9 - 3.4	8	14.5	29.9	81.8
3.4 - 3.9	1	1.8	3.7	83.6
3.9 - 4.4	2	3.6	7.5	87.3
4.4 - 4.9	1	1.8	3.7	89.1
5.4 - 5.8	1	1.8	3.7	90.9
5.8 - 6.3	3	5.5	11.2	96.4
6.3 - 6.8	1	1.8	3.7	98.2
6.8 - 7.3	1	1.8	3.7	100.0
	55			

Geometric mean particle size: 2.1 microns
Dispersity: 1.8

Table C.27 Epping 66.8% W/O/W Emulsion
Primary Distribution

Particle size range (microns)	Number frequency in range	Percentage in range	Percentage per micron	Cumulative percentage less than
0.0 - 0.6	6	2.9	4.7	2.9
0.6 - 1.2	49	23.6	38.7	26.4
1.2 - 1.8	44	21.2	34.7	47.6
1.8 - 2.3	23	11.1	22.7	58.7
2.3 - 3.0	30	14.4	19.7	73.1
3.0 - 3.7	17	8.2	13.4	81.3
3.7 - 4.3	7	3.4	5.5	84.6
4.3 - 4.9	4	1.9	3.2	86.5
4.9 - 5.5	6	2.9	4.7	89.4
5.5 - 6.1	2	1.0	1.6	90.4
6.1 - 6.7	5	2.4	3.9	92.8
6.7 - 7.3	3	1.4	2.4	94.2
7.3 - 7.9	1	0.5	0.8	94.7
8.5 - 9.7	3	1.4	1.2	96.2
9.7 - 17.0	2	1.0	0.1	97.1
17.0 - 20.7	3	1.4	0.4	98.6
20.7 - 25.6	1	0.5	0.1	99.0
25.6 - 26.2	1	0.5	0.8	99.5
26.2 - 57.2	1	0.5	0.0	100.0
	208			

Geometric mean particle size: 2.1 microns
Dispersity: 2.3

Table C.28 Epping 66.8% W/O/W Emulsion
Secondary Distribution

Particle size range (microns)	Number frequency in range	Percentage in range	Percentage per micron	Cumulative percentage less than
0.0 - 0.4	8	13.3	36.5	13.3
0.4 - 0.5	7	11.7	95.8	25.0
0.5 - 0.7	8	13.3	54.8	38.3
0.7 - 1.2	8	13.3	27.4	51.7
1.2 - 1.5	7	11.7	47.9	63.3
1.5 - 1.9	7	11.7	24.0	75.0
1.9 - 2.2	7	11.7	47.9	86.7
2.2 - 2.4	2	3.3	13.7	90.0
2.4 - 2.9	3	5.0	10.3	95.0
2.9 - 3.4	1	1.7	3.4	96.7
3.4 - 3.8	2	3.3	9.1	100.0
	60			

Geometric mean particle size: 0.9 microns
Dispersity: 2.4

Table C.29 Epping 70.4% W/O/W Emulsion
Primary Distribution

Particle size range (microns)	Number frequency in range	Percentage in range	Percentage per micron	Cumulative percentage less than
0.0 - 1.0	4	3.3	3.3	3.3
1.0 - 1.5	13	10.6	21.7	13.8
1.5 - 1.9	14	11.4	23.4	25.2
1.9 - 2.4	20	16.3	33.4	41.5
2.4 - 2.9	11	8.9	18.4	50.4
2.9 - 3.4	9	7.3	15.0	57.7
3.4 - 3.9	13	10.6	21.7	68.3
3.9 - 4.4	8	6.5	13.4	74.8
4.4 - 4.9	3	2.4	5.0	77.2
4.9 - 5.8	5	4.1	4.2	81.3
5.8 - 6.8	3	2.4	2.5	83.7
6.8 - 7.8	3	2.4	2.5	86.2
7.8 - 9.7	3	2.4	1.3	88.6
10.7 - 12.2	5	4.1	2.8	92.7
12.2 - 15.1	3	2.4	0.8	95.1
18.5 - 19.6	2	1.6	1.5	96.7
24.8 - 25.3	2	1.6	3.3	98.4
25.3 - 33.2	1	0.8	0.1	99.2
33.2 - 37.5	1	0.8	0.2	100.0
	123			

Geometric mean particle size: 3.2 microns
Dispersity: 2.3

Table C.30 Epping 70.4% W/O/W Emulsion
Secondary Distribution

Particle size range (microns)	Number frequency in range	Percentage in range	Percentage per micron	Cumulative percentage less than
0.0 - 1.0	3	13.6	14.0	13.6
1.0 - 1.9	7	31.8	32.7	45.5
1.9 - 2.9	5	22.7	23.3	68.2
2.9 - 3.9	3	13.6	14.0	81.8
3.9 - 4.4	1	4.5	9.3	86.4
4.4 - 5.0	1	4.5	7.5	90.9
5.0 - 6.3	1	4.5	3.4	95.5
6.3 - 6.8	1	4.5	9.3	100.0
	22			

Geometric mean particle size: 2.0 microns
Dispersity: 2.1

Table C.31 Epping 96.8% O/W Emulsion
Primary Distribution

Particle size range (microns)	Number frequency in range	Percentage in range	Percentage per micron	Cumulative percentage less than
0.0 - 0.5	4	4.9	10.0	4.9
0.5 - 0.7	16	19.5	80.1	24.4
0.7 - 1.0	16	19.5	80.1	43.9
1.0 - 1.5	8	9.8	20.0	53.7
1.5 - 1.7	11	13.4	55.1	67.1
1.7 - 1.9	5	6.1	25.0	73.2
1.9 - 2.2	5	6.1	25.0	79.3
2.2 - 2.6	7	8.5	23.4	87.8
2.6 - 3.4	3	3.7	4.3	91.5
3.4 - 3.7	3	3.7	15.0	95.1
3.7 - 4.6	3	3.7	3.8	98.8
4.6 - 5.8	1	1.2	1.0	100.0
	82			

Geometric mean particle size: 1.2 microns
Dispersity: 2.0

Table C.32 Epping 98.0% O/W Emulsion
Primary Distribution

Particle size range (microns)	Number frequency in range	Percentage in range	Percentage per micron	Cumulative percentage less than
0.5 - 0.9	2	3.4	9.4	3.4
0.9 - 1.0	14	24.1	198.2	27.6
1.0 - 1.2	9	15.5	63.7	43.1
1.2 - 1.5	12	20.7	85.0	63.8
1.5 - 1.7	5	8.6	35.4	72.4
1.7 - 1.9	4	6.9	28.3	79.3
1.9 - 2.7	3	5.2	7.1	84.5
2.7 - 3.2	2	3.4	7.1	87.9
3.2 - 3.7	2	3.4	7.1	91.4
3.7 - 3.9	3	5.2	21.2	96.6
3.9 - 4.1	1	1.7	7.1	98.3
4.1 - 6.3	1	1.7	0.8	100.0
	58			

Geometric mean particle size: 1.4 microns
Dispersity: 1.6

Table C.33 Epping 98.4% O/W Emulsion
Primary Distribution

Particle size range (microns)	Number frequency in range	Percentage in range	Percentage per micron	Cumulative percentage less than
0.0 - 0.2	1	0.7	2.9	0.7
0.2 - 0.6	4	2.8	7.8	3.5
0.6 - 0.7	11	7.8	64.1	11.3
0.7 - 1.0	54	38.3	157.3	49.6
1.0 - 1.2	47	33.3	136.9	83.0
1.2 - 1.5	10	7.1	29.1	90.1
1.5 - 1.7	4	2.8	11.6	92.9
1.7 - 1.9	3	2.1	8.7	95.0
1.9 - 2.2	2	1.4	5.8	96.5
2.2 - 2.4	3	2.1	8.7	98.6
4.9 - 5.1	1	0.7	2.9	99.3
5.8 - 6.1	1	0.7	2.9	100.0
	141			

Geometric mean particle size: 1.0 microns
Dispersity: 1.5

Table C.34 Primrose 3.6% W/O Emulsion
Primary Distribution

Particle size range (microns)	Number frequency in range	Percentage in range	Percentage per micron	Cumulative percentage less than
0.0 - 0.1	185	8.5	69.8	8.5
0.1 - 0.2	191	8.8	72.0	17.3
0.2 - 0.4	662	30.4	249.6	47.7
0.4 - 0.5	321	14.7	121.0	62.4
0.5 - 0.6	206	9.5	77.7	71.9
0.6 - 0.7	345	15.8	130.1	87.7
0.7 - 0.9	156	7.2	58.8	94.9
0.9 - 1.0	56	2.6	21.1	97.4
1.0 - 1.1	21	1.0	7.9	98.4
1.1 - 1.2	10	0.5	3.8	98.9
1.2 - 1.3	7	0.3	2.6	99.2
1.3 - 1.5	5	0.2	1.9	99.4
1.5 - 1.6	7	0.3	2.6	99.7
1.6 - 1.7	2	0.1	0.8	99.8
1.7 - 1.8	2	0.1	0.8	99.9
1.8 - 1.9	2	0.1	0.8	100.0
	2178			

Geometric mean particle size: 0.4 microns
Dispersity: 2.0

Table C.35 Primrose 22.8% W/O Emulsion
Primary Distribution

Particle size range (microns)	Number frequency in range	Percentage in range	Percentage per micron	Cumulative percentage less than
0.0 - 0.2	16	6.8	27.7	6.8
0.2 - 0.5	27	11.4	46.8	18.1
0.5 - 0.7	30	12.7	52.0	30.8
0.7 - 1.0	23	9.7	39.9	40.5
1.0 - 1.2	15	6.3	26.0	46.8
1.2 - 1.5	23	9.7	39.9	56.5
1.5 - 1.7	22	9.3	38.1	65.8
1.7 - 1.9	16	6.8	27.7	72.6
1.9 - 2.2	6	2.5	10.4	75.1
2.2 - 2.4	9	3.8	15.6	78.9
2.4 - 2.7	7	3.0	12.1	81.9
2.7 - 3.2	9	3.8	7.8	85.7
3.2 - 3.4	9	3.8	15.6	89.5
3.4 - 3.7	5	2.1	8.7	91.6
3.7 - 3.9	4	1.7	6.9	93.2
4.1 - 4.4	4	1.7	6.9	94.9
4.4 - 4.6	2	0.8	3.5	95.8
4.6 - 4.9	6	2.5	10.4	98.3
4.9 - 5.4	2	0.8	1.7	99.2
5.8 - 6.1	1	0.4	1.7	99.6
6.1 - 6.3	1	0.4	1.7	100.0
	237			

Geometric mean particle size: 1.1 microns
Dispersity: 2.6

Table C.36 Primrose 32.0% W/O Emulsion
Primary Distribution

Particle size range (microns)	Number frequency in range	Percentage in range	Percentage per micron	Cumulative percentage less than
0.0 - 0.1	24	5.8	47.7	5.8
0.1 - 0.2	18	4.4	35.8	10.2
0.2 - 0.4	85	20.6	169.0	30.8
0.4 - 0.7	76	18.4	50.4	49.2
0.7 - 1.0	85	20.6	84.5	69.7
1.0 - 1.2	44	10.7	43.7	80.4
1.2 - 1.5	34	8.2	33.8	88.6
1.5 - 1.7	12	2.9	11.9	91.5
1.7 - 1.9	8	1.9	8.0	93.5
1.9 - 2.2	3	0.7	3.0	94.2
2.2 - 2.4	9	2.2	8.9	96.4
2.4 - 2.7	7	1.7	7.0	98.1
2.7 - 3.4	2	0.5	0.7	98.5
3.4 - 5.6	2	0.5	0.2	99.0
6.7 - 9.1	2	0.5	0.2	99.5
12.2 - 13.4	1	0.2	0.2	99.8
13.4 - 14.7	1	0.2	0.2	100.0
	413			

Geometric mean particle size: 0.6 microns
Dispersity: 2.5

Table C.37 Primrose 44.8% W/O/W Emulsion
Primary Distribution

Particle size range (microns)	Number frequency in range	Percentage in range	Percentage per micron	Cumulative percentage less than
0.0 - 1.0	6	6.7	6.8	6.7
1.0 - 1.9	14	15.6	16.0	22.2
1.9 - 2.9	12	13.3	13.7	35.6
2.9 - 3.9	8	8.9	9.1	44.4
3.9 - 5.0	12	13.3	12.2	57.8
5.0 - 5.8	11	12.2	14.3	70.0
5.8 - 6.8	12	13.3	13.7	83.3
6.8 - 8.3	6	6.7	4.6	90.0
9.0 - 10.3	3	3.3	2.5	93.3
10.3 - 11.6	2	2.2	1.8	95.6
11.6 - 12.8	2	2.2	1.8	97.8
15.8 - 18.3	1	1.1	0.5	98.9
18.3 - 21.9	1	1.1	0.3	100.0
	90			

Geometric mean particle size: 3.6 microns
Dispersity: 2.3

Table C.38 Primrose 44.8% W/O/W Emulsion
Secondary Distribution

Particle size range (microns)	Number frequency in range	Percentage in range	Percentage per micron	Cumulative percentage less than
0.0 - 0.2	4	4.0	16.4	4.0
0.2 - 0.5	5	5.0	20.5	9.0
0.5 - 0.7	11	11.0	45.2	20.0
0.7 - 1.0	12	12.0	49.3	32.0
1.0 - 1.2	17	17.0	69.8	49.0
1.2 - 1.5	13	13.0	53.4	62.0
1.5 - 1.7	8	8.0	32.9	70.0
1.7 - 1.9	6	6.0	24.6	76.0
1.9 - 2.2	6	6.0	24.6	82.0
2.2 - 2.4	3	3.0	12.3	85.0
2.4 - 2.7	6	6.0	24.6	91.0
2.7 - 3.2	2	2.0	4.1	93.0
3.2 - 3.4	2	2.0	8.2	95.0
3.7 - 3.9	2	2.0	8.2	97.0
3.9 - 4.1	1	1.0	4.1	98.0
4.9 - 5.1	1	1.0	4.1	99.0
6.3 - 6.8	1	1.0	2.1	100.0
	100			

Geometric mean particle size: 1.2 microns
Dispersity: 2.1

Table C.39 Primrose 48.2% W/O/W Emulsion
Primary Distribution

Particle size range (microns)	Number frequency in range	Percentage in range	Percentage per micron	Cumulative percentage less than
0.0 - 0.2	17	7.1	29.2	7.1
0.2 - 0.5	33	13.8	56.7	20.9
0.5 - 0.7	25	10.5	43.0	31.4
0.7 - 1.0	32	13.4	55.0	44.8
1.0 - 1.2	20	8.4	34.4	53.1
1.2 - 1.5	10	4.2	17.2	57.3
1.5 - 1.7	14	5.9	24.1	63.2
1.7 - 1.9	10	4.2	17.2	67.4
1.9 - 2.2	11	4.6	18.9	72.0
2.2 - 2.4	8	3.3	13.7	75.3
2.4 - 2.7	13	5.4	22.3	80.8
2.7 - 2.9	10	4.2	17.2	84.9
2.9 - 3.4	10	4.2	8.6	89.1
3.4 - 3.7	3	1.3	5.2	90.4
3.7 - 3.9	5	2.1	8.6	92.5
3.9 - 4.1	4	1.7	6.9	94.1
4.1 - 4.4	4	1.7	6.9	95.8
4.4 - 4.6	3	1.3	5.2	97.1
4.6 - 4.9	2	0.8	3.4	97.9
4.9 - 5.6	2	0.8	1.1	98.7
5.6 - 5.8	1	0.4	1.7	99.2
6.3 - 6.6	1	0.4	1.7	99.6
6.6 - 6.8	1	0.4	1.7	100.0
	239			

Geometric mean particle size: 1.1 microns
Dispersity: 2.6

Table C.40 Primrose 48.2% W/O/W Emulsion
Secondary Distribution

Particle size range (microns)	Number frequency in range	Percentage in range	Percentage per micron	Cumulative percentage less than
0.0 - 0.2	17	7.8	32.2	7.8
0.2 - 0.5	29	13.4	54.9	21.2
0.5 - 0.7	24	11.1	45.4	32.3
0.7 - 1.0	24	11.1	45.4	43.3
1.0 - 1.2	17	7.8	32.2	51.2
1.2 - 1.5	10	4.6	18.9	55.8
1.5 - 1.7	9	4.1	17.0	59.9
1.7 - 1.9	10	4.6	18.9	64.5
1.9 - 2.2	14	6.5	26.5	71.0
2.2 - 2.4	9	4.1	17.0	75.1
2.4 - 2.7	15	6.9	28.4	82.0
2.7 - 2.9	4	1.8	7.6	83.9
2.9 - 3.2	7	3.2	13.2	87.1
3.2 - 3.4	6	2.8	11.4	89.9
3.4 - 3.7	6	2.8	11.4	92.6
3.7 - 3.9	4	1.8	7.6	94.5
3.9 - 4.1	1	0	1.9	94.9
4.1 - 4.4	4	1.8	7.6	96.8
4.4 - 4.6	5	2.3	9.5	99.1
4.6 - 4.9	1	0.5	1.9	99.5
4.9 - 5.1	1	0.5	1.9	100.0
	217			

Geometric mean particle size: 1.1 microns
Dispersity: 2.7

Table C.41 Primrose 62.4% W/O/W Emulsion
Primary Distribution

Particle size range (microns)	Number frequency in range	Percentage in range	Percentage per micron	Cumulative percentage less than
0.0 - 0.5	3	11.1	22.8	11.1
3.4 - 11.7	6	22.2	2.7	33.3
11.7 - 15.1	7	25.9	7.6	59.3
15.1 - 18.5	3	11.1	3.3	70.4
18.5 - 20.5	2	7.4	3.8	77.8
20.5 - 21.4	2	7.4	7.6	85.2
21.4 - 27.8	1	3.7	0.6	88.9
27.8 - 33.1	1	3.7	0.7	92.6
33.1 - 43.8	1	3.7	0.3	96.3
43.8 - 47.2	1	3.7	1.1	100.0
	27			

Geometric mean particle size: 9.4 microns
Dispersity: 4.1

Table C.42 Primrose 62.4% W/O/W Emulsion
Secondary Distribution

Particle size range (microns)	Number frequency in range	Percentage in range	Percentage per micron	Cumulative percentage less than
0.0 - 0.2	1	1.2	4.9	1.2
0.2 - 0.6	4	4.8	13.2	6.0
0.6 - 0.7	20	24.1	197.9	30.1
0.7 - 1.0	14	16.9	69.3	47.0
1.0 - 1.2	4	4.8	19.8	51.8
1.2 - 1.5	6	7.2	29.7	59.0
1.5 - 1.7	5	6.0	24.7	65.1
1.7 - 1.9	5	6.0	24.7	71.1
1.9 - 2.2	5	6.0	24.7	77.1
2.2 - 2.4	2	2.4	9.9	79.5
2.4 - 2.7	2	2.4	9.9	81.9
2.7 - 2.9	2	2.4	9.9	84.3
3.2 - 3.4	1	1.2	4.9	85.5
3.7 - 3.9	2	2.4	9.9	88.0
3.9 - 4.4	2	2.4	4.9	90.4
4.4 - 4.6	1	1.2	4.9	91.6
4.6 - 5.4	1	1.2	1.6	92.8
5.4 - 6.6	1	1.2	1.0	94.0
6.6 - 7.5	2	2.4	2.5	96.4
7.5 - 8.5	2	2.4	2.5	98.8
8.5 - 9.3	1	1.2	1.6	100.0
	83			

Geometric mean particle size: 1.3 microns
Dispersity: 2.3

Table C.43 Primrose 64.4% W/O/W Emulsion
Primary Distribution

Particle size range (microns)	Number frequency in range	Percentage in range	Percentage per micron	Cumulative percentage less than
0.0 - 3.0	2	4.9	1.6	4.9
3.0 - 6.1	6	14.6	4.8	19.5
6.1 - 9.7	11	26.8	7.3	46.3
9.7 - 12.2	6	14.6	6.0	61.0
12.2 - 14.6	4	9.8	4.0	70.7
14.6 - 19.5	4	9.8	2.0	80.5
19.5 - 21.9	4	9.8	4.0	90.2
21.9 - 24.4	1	2.4	1.0	92.7
24.4 - 28.0	1	2.4	0.7	95.1
28.0 - 41.4	2	4.9	0.4	100.0
	41			

Geometric mean particle size: 10.0 microns
Dispersity: 2.0

Table C.44 Primrose 64.4% W/O/W Emulsion
Secondary Distribution

Particle size range (microns)	Number frequency in range	Percentage in range	Percentage per micron	Cumulative percentage less than
0.0 - 0.2	1	0.9	3.8	0.9
0.2 - 0.5	7	6.4	26.4	7.3
0.5 - 0.7	47	43.1	177.1	50.5
0.7 - 1.0	25	22.9	94.2	73.4
1.0 - 1.2	11	10.1	41.4	83.5
1.2 - 1.5	4	3.7	15.1	87.2
1.5 - 1.7	5	4.6	18.8	91.7
1.7 - 2.2	3	2.8	5.7	94.5
2.2 - 2.4	1	0.9	3.8	95.4
2.4 - 2.7	3	2.8	11.3	98.2
3.2 - 3.4	1	0.9	3.8	99.1
3.4 - 3.7	1	0.9	3.8	100.0
	109			

Geometric mean particle size: 0.8 microns
Dispersity: 1.7

Table C.45 Primrose 78.5% O/W Emulsion
Primary Distribution

Particle size range (microns)	Number frequency in range	Percentage in range	Percentage per micron	Cumulative percentage less than
0.0 - 0.2	2	3.8	15.5	3.8
0.2 - 0.5	6	11.3	46.5	15.1
0.5 - 0.7	12	22.6	93.0	37.7
0.7 - 1.7	10	18.9	19.4	56.6
1.7 - 1.9	6	11.3	46.5	67.9
1.9 - 2.2	5	9.4	38.7	77.4
2.2 - 2.7	4	7.5	15.5	84.9
2.7 - 2.9	4	7.5	31.0	92.5
2.9 - 6.1	2	3.8	1.2	96.2
6.1 - 7.3	1	1.9	1.5	98.1
7.3 - 8.5	1	1.9	1.5	100.0
	53			

Geometric mean particle size: 1.2 microns
Dispersity: 2.5

Table C.46 Primrose 82.4% O/W Emulsion
Primary Distribution

Particle size range (microns)	Number frequency in range	Percentage in range	Percentage per micron	Cumulative percentage less than
0.0 - 0.5	2	3.9	8.1	3.9
0.5 - 1.0	16	31.4	64.4	35.3
1.0 - 1.5	6	11.8	24.2	47.1
1.5 - 1.9	9	17.6	36.2	64.7
1.9 - 2.4	3	5.9	12.1	70.6
2.4 - 3.4	4	7.8	8.1	78.4
3.4 - 3.9	3	5.9	12.1	84.3
3.9 - 4.9	3	5.9	6.0	90.2
4.9 - 5.4	3	5.9	12.1	96.1
5.4 - 7.8	1	2.0	4.0	98.0
8.0 - 8.1	1	2.0	8.1	100.0
	51			

Geometric mean particle size: 1.5 microns
Dispersity: 2.2

Table C.47 Primrose 88.8% O/W Emulsion
Primary Distribution

Particle size range (microns)	Number frequency in range	Percentage in range	Percentage per micron	Cumulative percentage less than
0.0 - 0.7	9	7.8	10.6	7.8
0.7 - 1.0	8	6.9	28.3	14.7
1.0 - 1.2	13	11.2	46.0	25.9
1.2 - 1.5	7	6.0	24.8	31.9
1.5 - 1.7	14	12.1	49.6	44.0
1.7 - 1.9	13	11.2	46.0	55.2
1.9 - 2.2	7	6.0	24.8	61.2
2.2 - 2.4	7	6.0	24.8	67.2
2.4 - 2.7	3	2.6	10.6	69.8
2.7 - 2.9	4	3.4	14.2	73.3
2.9 - 3.2	4	3.4	14.2	76.7
3.2 - 3.3	3	2.6	21.2	79.3
3.3 - 3.7	8	6.9	18.9	86.2
3.7 - 3.9	2	1.7	7.1	87.9
3.9 - 4.4	5	4.3	8.9	92.2
4.4 - 5.1	3	2.6	3.5	94.8
5.1 - 5.6	3	2.6	5.3	97.4
5.6 - 6.1	1	0.9	1.8	98.3
6.1 - 6.3	1	0.9	3.5	99.1
6.3 - 6.6	1	0.9	3.5	100.0
	116			

Geometric mean particle size: 1.8 microns
Dispersity: 2.0

Table C.48 Primrose 95.2% O/W Emulsion
Primary Distribution

Particle size range (microns)	Number frequency in range	Percentage in range	Percentage per micron	Cumulative percentage less than
0.0 - 0.2	2	2.9	12.1	2.9
0.2 - 0.5	9	13.2	54.4	16.2
0.5 - 0.7	9	13.2	54.4	29.4
0.7 - 0.9	4	5.9	48.3	35.3
0.9 - 1.2	7	10.3	28.2	45.6
1.2 - 1.5	3	4.4	18.1	50.0
1.5 - 1.7	5	7.4	30.2	57.4
1.7 - 1.9	5	7.4	30.2	64.7
1.9 - 2.2	5	7.4	30.2	72.1
2.2 - 2.7	8	11.8	24.2	83.8
2.7 - 3.2	3	4.4	9.1	88.2
3.2 - 3.7	2	2.9	6.0	91.2
3.7 - 4.6	2	2.9	3.0	94.1
4.6 - 5.6	2	2.9	3.0	97.1
5.6 - 5.8	1	1.5	6.0	98.5
6.8 - 10.2	1	1.5	0.4	100.0
	68			

Geometric mean particle size: 1.2 microns
Dispersity: 2.4

END

24-03-86

FIN