

# **BASIC DATA OF CHAPTER 3**

**Table 17.** Composition of different phases obtained for Na<sub>2</sub>AASs/HTAB/H<sub>2</sub>O system at 298K. (Na<sub>2</sub>AAS: HTAB, 80, 60, 50, 40 and 20 w/w).

Composition of Na <sub>2</sub> AAS: HTAB different phases		Wt%									
		1	1.5	2	2.5	3	3.5	4	4.5	5	
		<b>C<sub>12</sub>MalNa<sub>2</sub> / HTAB / H<sub>2</sub>O</b>									
Gel	20:80	0.00	0.00	0.00	0.00	0.90	4.00	9.70	8.80	8.50	
		0.00	0.00	0.00	5.60	8.40	9.60	11.9	11.9	12.9	
		7.80	5.60	7.70	7.80	8.40	8.00	8.90	8.80	8.50	
		92.2	94.5	92.3	86.6	82.2	78.4	69.5	70.5	70.1	
	40:60	0.00	0.00	0.00	0.00	0.80	3.80	8.70	8.70	8.40	
		0.00	0.00	0.00	5.30	8.20	9.20	10.9	10.9	11.9	
		7.20	5.40	7.50	7.30	8.20	7.80	8.30	8.50	8.40	
		92.4	95.5	93.3	87.6	83.2	79.4	69.5	71.5	71.1	
	Viscous	50:50	0.00	0.00	0.00	0.00	0.70	3.50	8.50	7.80	7.50
			0.00	0.00	0.00	4.60	7.30	8.50	10.6	10.7	11.4
			7.80	5.60	7.70	7.80	8.40	8.00	8.90	8.80	8.50
			92.2	95.8	94.3	88.6	84.2	80.4	71.5	72.5	73.1
Precipitation	60:40	0.00	0.00	0.00	0.00	0.60	3.20	7.70	7.80	7.50	
		0.00	0.00	0.00	4.60	6.40	7.60	9.90	8.9	9.90	
		7.60	5.40	7.60	7.70	8.30	7.80	7.80	8.50	8.20	
		93.2	95.8	95.3	89.6	86.2	82.4	72.5	73.5	74.1	
	80:20	0.00	0.00	0.00	0.00	0.60	3.10	7.60	7.70	5.50	
		0.00	0.00	0.00	3.60	4.40	5.60	5.9	6.9	7.90	
		6.60	4.40	6.60	6.70	6.30	6.80	6.80	6.50	7.20	
		94.2	96.8	96.3	90.6	88.2	85.4	75.5	75.5	79.1	
			<b>C<sub>12</sub>AspNa<sub>2</sub> / HTAB / H<sub>2</sub>O</b>								
	Gel	20:80	0.00	0.00	0.00	0.00	0.90	3.20	8.20	7.50	6.80
			0.00	0.00	0.00	5.00	7.90	8.00	10.4	10.0	11.3
			5.40	4.70	6.90	7.50	6.50	6.40	7.50	6.90	6.80
94.6			95.3	93.1	87.5	84.7	82.4	73.9	75.6	75.1	
40:60		0.00	0.00	0.00	0.00	0.70	3.50	8.50	7.80	7.50	
		0.00	0.00	0.00	4.60	7.30	8.50	10.6	10.7	11.4	
		4.80	4.60	5.70	6.80	6.40	6.00	7.20	6.50	6.20	
		95.2	96.8	94.3	88.6	84.2	80.4	71.5	72.5	73.1	
Viscous		50:80	0.00	0.00	0.00	0.00	0.70	3.50	7.50	7.20	7.10
			0.00	0.00	0.00	3.60	6.30	8.50	9.60	9.70	10.4
			4.80	4.60	4.70	5.80	5.40	5.00	6.20	5.50	5.20
			95.2	96.8	94.3	88.6	84.2	80.4	71.5	72.5	73.1
Precipitation	60:40	0.00	0.00	0.00	0.00	0.90	3.20	8.20	5.50	6.80	
		0.00	0.00	0.00	5.00	3.90	6.00	4.40	6.0	6.3	
		5.40	4.70	6.90	5.50	4.50	3.40	3.50	5.90	6.80	
		94.6	95.3	93.1	87.5	84.7	82.4	73.9	75.6	75.1	
	80:20	0.00	0.00	0.00	0.00	0.90	3.20	8.20	7.50	6.80	
		0.00	0.00	0.00	5.00	7.90	8.00	10.4	10.0	11.3	

5.40 4.70 6.90 7.50 6.50 6.40 7.50 6.90 6.80  
 94.6 95.3 93.1 87.5 84.7 82.4 73.9 75.6 75.1

**C<sub>12</sub>GluNa<sub>2</sub> / HTAB / H<sub>2</sub>O**

Gel	20:80	0.00	0.00	0.00	0.00	0.70	2.40	7.50	6.90	5.70
		0.00	0.00	0.00	4.30	7.50	6.40	8.90	8.80	10.2
		2.70	3.80	5.70	7.20	6.10	5.60	5.90	5.70	2.00
		97.3	96.2	94.3	92.8	85.8	85.6	77.7	78.6	82.2
	40:60	0.00	0.00	0.00	0.00	0.70	2.40	6.50	6.80	5.60
		0.00	0.00	0.00	4.20	6.50	5.40	7.90	7.80	9.20
		2.10	3.50	5.20	6.20	5.10	5.20	5.40	5.10	1.50
		97.3	97.2	95.3	93.8	86.8	86.6	79.7	79.6	85.2
	50:50	0.00	0.00	0.00	0.00	0.70	2.20	5.50	4.90	4.70
		0.00	0.00	0.00	4.30	5.50	4.40	7.90	6.80	9.20
		2.70	3.80	4.70	5.20	5.10	4.60	4.90	3.70	2.00
		97.3	96.2	94.3	92.8	85.8	85.6	77.7	78.6	82.2
60:40	0.00	0.00	0.00	0.00	0.70	2.40	7.50	6.90	5.70	
	0.00	0.00	0.00	4.30	7.50	6.40	8.90	8.80	10.2	
	0.00	0.00	0.00	4.30	4.50	4.30	5.90	5.80	7.20	
	2.70	3.80	4.70	5.20	5.10	4.60	4.90	3.70	2.00	
80:20	97.3	96.2	94.3	92.8	85.8	85.6	77.7	78.6	82.2	
	0.00	0.00	0.00	4.30	7.50	6.40	8.90	8.80	10.2	
	0.00	0.00	0.00	4.30	5.50	4.40	7.90	6.80	9.20	
	2.70	2.80	3.70	3.20	3.10	3.60	4.90	2.70	2.00	
		98.3	97.2	97.3	95.8	89.8	86.6	79.7	82.6	87.2

**Table 18.** Results on the thermogravimetric analysis of Na<sub>2</sub>AAS+HTAB mixed gel systems. Concentration: (100, 60, 40 and 20mM, Na<sub>2</sub>AAS: HTAB, M/M).

Concentration/mM	Na <sub>2</sub> AAS, mol%	Temperature range/°C	%wt. remaining
<b>C<sub>12</sub>MalNa<sub>2</sub>+HTAB</b>			
100	20	43-102	67
		232-259	27
	50	48-107	69
		238-268	30
	60	58-115	72
		248-269	35
80	78-125	75	
	278-298	39	
60	20	43-102	67
		232-259	27
	40	48-107	69
		238-268	30
	50	58-115	72
		248-269	35
60	78-125	75	
	48-107	69	
40	20	43-102	67
		232-289	45
	40	48-107	69
		238-268	30
	50	58-124	77
		248-269	35
60	78-125	75	
	48-107	69	
20	20	43-102	67
		63-144	85
	40	232-259	27
		49-117	85
	50	238-268	30
		48-102	72
60	43-102	69	
	242-279	41	
80	68-152	89	
	258-298	42	

**Table 19.** Zero shear viscosity ( $\eta_0$ ) and % of cell viability of lymphocytes cell values at 40 mol % of Na<sub>2</sub>AAS in different concentration of Na<sub>2</sub>AASs-HTAB mixed surfactant systems at 298K.

<b>System</b>	<b><math>\eta_0 / cP</math></b>	<b>% Cell viability</b>
<b>Concentration / mM</b>		
<b>C<sub>12</sub>MalNa<sub>2</sub> + HTAB</b>		
100	70.0	71
80	55.5	76
60	46.0	80
40	37.6	87
20	34.5	93
10	30.0	95
<b>C<sub>12</sub>AspNa<sub>2</sub> + HTAB</b>		
100	61.2	69
80	45.5	74
60	37.3	76
50	32.0	83
40	26.0	87
20	22.7	93
<b>C<sub>12</sub>GluNa<sub>2</sub> + HTAB</b>		
100	53.4	65
80	40.9	66
60	35.0	69
40	29.0	76
20	23.0	84
10	20.0	90