280. The Fricke Article discloses a krill extract, as recited in claim 1 of the '351 patent. See, e.g.: "The lipid classes, fatty acids of total and individual lipids and sterols of Antarctic krill (Euphausia superba Dana) from two areas of the Antarctic Ocean were analyzed by thin layer chromatography (TLC), gas liquid chromatography (GLC) and gas liquid chromatography /mass spectrometry (GLC/MS)." See Ex. 1006 at p. 821 "Krill samples of 5 kg were quick-frozen and stored at -35 C until analyzed. Subsamples prepared from the core of the 5 kg samples were homogenized in a mortar under liquid nitrogen, and lipid extraction was performed according to Folch et al. Lipids were dissolved in dichloromethane: methanol 1:1 (v/v) and stored under a nitrogen atmosphere at -23 C." See Ex. 1006 at p. 821. The Fricke Article discloses the claimed phospholipid. The claimed phospholipid would necessarily be present in the total lipid extraction of krill performed in the Fricke Article. Further, to the extent the '351 patent discloses the claimed phospholipid, so does the Fricke Article. See, e.g.: "The positional analysis of the fatty acids in the main phospholipids PC and PE (Table 6) shows that saturated fatty acids are commonly linked to the sn-1 position and that the sn-2 position is preferred by unsaturated fatty acids. In this respect krill has the same

fatty acid distribution as other marine animals (41).” See Ex. 1006 at p. 826, Table 6

TABLE 6

Fatty Acid Positional Analysis in Phosphatidylcholine (PC) and Phosphatidylethanolamine (PE) of *Euphausia superba* Dana (1977 Sample)

Phospholipid	PC		PE	
sn-position	*sn*-1	*sn*-2	*sn*-1	*sn*-2
14:0	3.5	2.3	0.7	0.8
16:0	60.8	4.7	45.4	3.3
16:1(n-7)	1.5	5.4	0.7	0.5
18:0	1.9	0.8	5.6	1.5
18:1(n-7)	11.1	tr.	24.0	0.9
18:1(n-9)	3.5	22.0	4.8	2.9
18:2(n-6)	0.6	4.8	0.6	0.6
20:5(n-3)	5.6	27.7	5.7	31.3
22:6(n-3)	2.1	11.1	3.5	41.3
Others	9.4	21.2	9.0	16.9

Data are expressed as wt % of fatty acids in one position from one experiment.

281. The Fricke Article discloses a krill extract that is suitable for human consumption. See, e.g.: “Krill samples of 5 kg were quick-frozen and stored at -35 C until analyzed. Subsamples prepared from the core of the 5 kg samples were homogenized in a mortar under liquid nitrogen, and lipid extraction was performed according to Folch et al. (15). Lipids were dissolved in dichloromethane: methanol 1:1 (v/v) and stored under a nitrogen atmosphere at -23 C.” See Fricke at p. 821. It follows from the passage above that those performing the analyses described in the Fricke Article necessarily evaporated the solvents used for extraction before conducting such analyses – leaving behind an extract suitable for human consumption.

282. The Fricke Article discloses a krill extract that has a total phospholipid concentration in an amount of about 40% w/w, wherein about represents ±10%, as recited in claim 2 of the '351 patent. See, e.g.: "Euphausia superba is extremely rich in phospholipids (>40% of total lipids)…" Ex., 1006 at p. 822, see also Table 1.

TABLE 1

Lipid Composition of Antarctic Krill
(*Euphausia superba* Dana)

Sample	12/1977	3/1981
Total lipid content (% wet weight)	2.7 ± 0.2	6.2 ± 0.3
Phospholipids		
Phosphatidylcholine	35.6 ± 0.1	33.3 ± 0.5
Phosphatidylethanolamine	6.1 ± 0.4	5.2 ± 0.5
Lysophosphatidylcholine	1.5 ± 0.2	2.8 ± 0.4
Phosphatidylinositol	0.9 ± 0.1	1.1 ± 0.4
Cardiolipin	1.0 ± 0.4	1.6 ± 0.2
Phosphatidic acid	0.6 ± 0.4	
Neutral lipids		
Triacylglycerols	33.3 ± 0.5	40.4 ± 0.1
Free fatty acids[a]	16.1 ± 1.3	8.5 ± 1.0
Diacylglycerols	1.3 ± 0.1	3.6 ± 0.1
Sterols	1.7 ± 0.1	1.4 ± 0.1
Monoacylglycerols	0.4 ± 0.2	0.9 ± 0.1
Others[b]	0.9 ± 0.1	0.5 ± 0.1
Total	98.9	99.3

Data are expressed as wt % of total lipids and represent means ± standard deviation of 3 separate experiments.

[a] Probably mostly artifacts.

[b] Traces of lysophosphatidylethanolamine, phosphatidylserine, sphingomyelin, glycolipids, sterol esters, waxes and carotenoids were detected.

283. The Fricke Article discloses a krill extract that has a total phospholipid concentration in an amount of about 45% w/w, wherein about represents ±20%, as recited in claim 3 of the '351 patent. See, e.g.: "Euphausia

superba is extremely rich in phospholipids (>40% of total lipids)…" Ex. 1006 at p. 822, see also Table 1.

284. The Fricke Article discloses a krill extract that further comprises an additional lipid, including monoglycerides, triglycerides, and free fatty acids, as recited in claim 4 of the '351 patent. See Ex. 1006 at p. 822, see also Table 1.

285. The Fricke Article discloses a krill extract that has a concentration of free fatty acids of about 5% w/w of the lipids in the extract, as recited in claim 5 of the '351 patent. See, e.g.: "Samples of the same haul which were cooked on board immediately after hauling and stored under the same conditions showed a FFA content which was much lower, ranging from 1% to 3% of total lipids." Ex. 1006 at p. 822, see also Table 1.

286. The Fricke Article discloses a krill extract wherein the extract further comprises polyunsaturated fatty acids which comprise at least 15% w/w of the lipids in the extract. See, e.g.: "The composition of the fatty acids of total lipids of Euphausia superba is similar to that of other marine crustaceans and some marine fishes (29) (Tables 2 and 3). The main fatty acids are 14:0 (11-15%), 16:0 (26-32%), 16:1(n-7) (7%), 18:1(n-9) (10%), 18:1(n-7) (8%), 20:5(n-3) (8-13%) and 22:6(n-3) (3-5%)." Ex. 1006 at p. 823, see also Table 2.

287. The Fricke Article discloses a krill extract wherein the extract further comprises polyunsaturated fatty acids which comprise at least 15% w/w of the

lipids in the extract, and wherein the polyunsaturated fatty acids are omega-3 fatty acids, as recited in claim 9 of the '351 patent. See, e.g.: "The composition of the fatty acids of total lipids of Euphausia superba is similar to that of other marine crustaceans and some marine fishes (29)(Tables 2 and 3). The main fatty acids are 14:0 (11-15%), 16:0 (26-32%), 16:1(n-7) (7%), 18:1(n-9) (10%), 18:1(n-7) (8%), 20:5(n-3) (8-13%) and 22:6(n-3) (3-5%)." Ex. 1006 at p. 823, see also Table 2.

288. The Fricke Article discloses the claimed phospholipid, wherein one of R1 and R2 is EPA and the other is DHA, as recited in claim 19 of the '351 patent. The claimed phospholipid, wherein one of R1 and R2 is EPA and the other is DHA, would necessarily be present in the total lipid extraction of krill performed in the Fricke Article. Further, to the extent the '351 patent discloses the claimed phospholipid, wherein one of R1 and R2 is EPA and the other is DHA, so does the Fricke Article. See, e.g.: "The positional analysis of the fatty acids in the main phospholipids PC and PE (Table 6) shows that saturated fatty acids are commonly linked to the sn-1 position and that the sn-2 position is preferred by unsaturated fatty acids. In this respect krill has the same fatty acid distribution as other marine animals (41)." Ex. 1006 at p. 826, see also Table 6. As additional evidence, Le Grandois demonstrates that krill oil extracted by the Folch method contained PC-

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