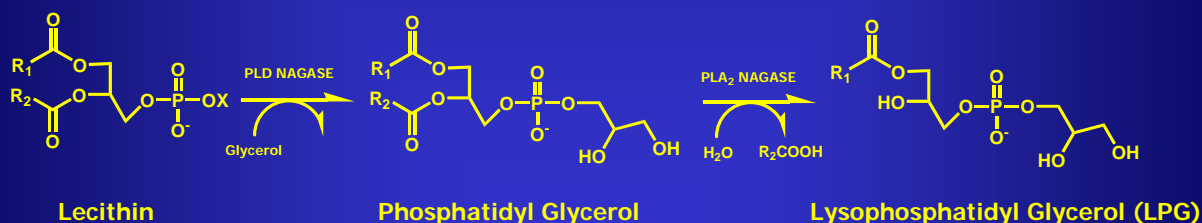


Functional phospholipid: Soy Bean Lysophosphatidylglycerol prepared by microbial enzyme process

Characteristics

- Strong emulsification leads to strong O/W emulsion and its high heat-stability
- High interfacial activity leads to high foaming property
- High binding property with protein and starch
- Antimicrobial activity
- High moisturizing activity
- Antioxidant activity leads to superior emulsion with high storage stability

Synthesis with Enzymatic Reaction



Emulsion Stability

Preparation of Emulsion

	LPG Nagase	Lysolecithin
Soy bean oil (g)	75	75
Lecithin (g)	0.02 (LPG Nagase)	0.2 (lysolecithin)
Egg volk (g)	5	5
Salt (g)	2	2
Vinegar (g)	5	5
Water (g)	Residual quantity	Residual quantity
Total (g)	100	100

Heat and Storage Stability

Condition	Appearance	Appearance
Not treated	No separation	Separation
95 °C, for 60 min	No separation	Separation
34 °C, for 6 weeks	No separation	Separation

Spec. (tentative)

LPG content	20 ± 1%
Arsenic as As ₂ O ₃	3 mg/g
Heavy metals as Pb	5 mg/g
Viable cell count	10,000 CFU/g
E. coli	Negative
Salmonella	Negative
Acid value	40
Peroxide value	10

Storage data

- with nitrogen gas : 3months, 40
- without nitrogen gas : 1month, 40

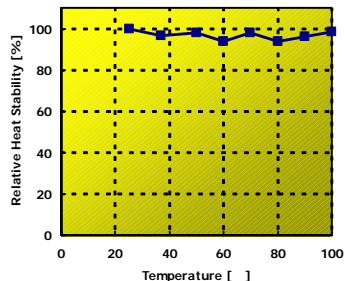
Safety data

- Chromosome aberrations test : Negative

Stability

- Heat Stability : 25 <temperature<100 (LPG conc. 0.5%, pH7.0, for 30min)
- pH stability : 2<pH<11 (LPG conc. 0.5%, 25 °C, for 30min)

Heat Stability of LPG



pH Stability of LPG

