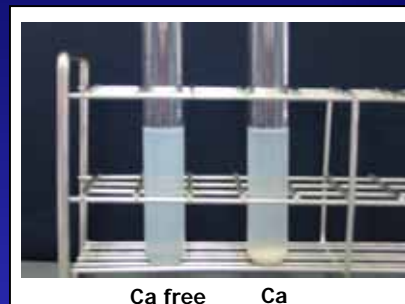


Functional phospholipids: enriched phosphatidylserine and phosphatidylinositol

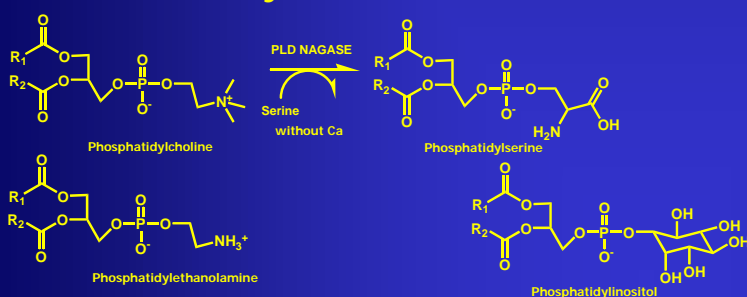
Characteristic

- contains not only PS but also PI enriched by enzyme process
- superior emulsifying power (Ca free)
- PLD activity is completely removed, and stability was largely improved (PCT/JP2005/005631)
- Anti-oxidative stress
- Improve liver dysfunction
- Increased in the serum adiponectin concentration

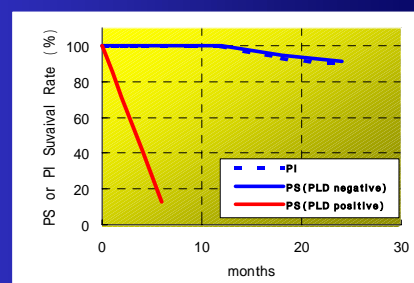


PIPS water suspension

Synthesis with Enzymatic Reaction



Stability (25 °C)



Spec.

PS	30% (w/w)
PI	20% (w/w)
PLD Activity	Not detectable
Peroxide value	10meq/kg
Viable Cell Count	1000CFU/g
<i>E. coli</i>	Negative
Arsenic	1 ppm
Heavy metals as Pb	5 ppm

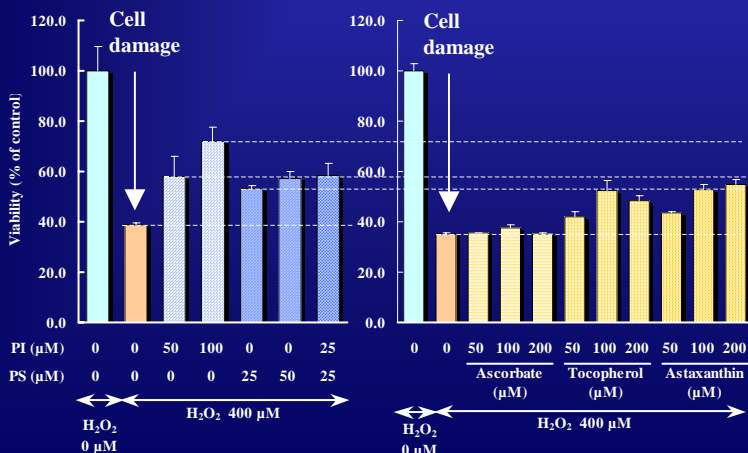
Emulsion

Influence of pH to emulsification liquid

density of emulsification	pH	state of emulsification liquid	
		No processing	100 for 30 min
1%	3.0		+
	3.5		
	4.0		+
	4.5		+
	5.0		+
2%	3.0		+
	3.5		
	4.0		+
	4.5		++
	5.0		++

* ; no deposition, +; deposition, ++; much deposition

Pharmacology



Effect of PIPS on hepatic injury marker enzyme activities in serum of Zucker rats

(IU/L)	Control	PIPS
GOT	53.2 ± 5.0	36.6 ± 1.5*
GPT	31.3 ± 4.3	17.1 ± 0.7

* $P < 0.05$ (vs control)

Effect of PIPS on adiponectin level in serum of Zucker rats

(mg/mL)	Control	PIPS
Adiponectin	10.2 ± 0.5	13.2 ± 0.6*

* $P < 0.05$ (vs control)