



TECHNICAL DATA SHEET

Punature PLA1 is a food grade fungal phospholipase A1 enzyme preparation obtained by deep fermentation of *Aspergillus oryzae*. It hydrolyzes phospholipids to lysophospholipids. It can be used to hydrolyze phospholipids in flour to increase stability of the dough and give bigger volume; it can also be used as a processing aid during cheese production, especially Mozzarella and Pasta Filata type. The enzyme is applied 20 minutes prior to renneting and its treatment reduced fat losses in whey and cooking water, and increased cheese yield as a result of improved fat and moisture retention in the cheese curd.

SPECIFICATION:

Appearance	Gray to light yellow powder	Arsenic (As)	≤3.0mg/kg
Odour	Typical fermentation smell	Total Plate Count	≤ 5x10 ⁴ CFU/g
Enzyme activity	≥5,000u/g	Coliforms	≤ 30 CFU/g
Loss on drying	≤10%	E. coli	≤ 10 CFU/g
Lead (Pb)	≤5.0mg/kg	Salmonella	Not detected in 25g

BENEFITS:

For bakery:	For Cheese:
1. Emulsifier replacer	5. Reduce fat losses in whey and cooking water
2. Increase stability of dough and mechanical handling tolerance	6. Increase cheese yield by 1-3%
3. Increase the loaf volume	7. No changes in functionality (melting, stretching, and browning)
4. Increase the softness and fitness of the crumb	

DOSAGE: 10-30ppm (1.0-3.0g/100KG flour), the optimum dosage should be determined by means of baking tests; 35 gr per 1000L cheese milk with 3.5% fat is recommended to improve cheese yield.

PACKAGING: 20KG/ paper drum

SHELF LIFE & STORAGE:

24 months from date of production when stored in a dry place and away from sunlight at temperature less than 25°C; the shelf life can be extended by refrigeration at 5°C.

SAFETY AND PRECAUTIONS:

Inhalation of dust may cause allergic reactions. May irritate the skin, eyes, and mucous membranes upon prolonged contact. Wear overalls with dust masks and gloves. If accidentally contact with skin or eyes, rinse immediately with plenty of water.