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Protease PLUS

PRODUCT # 204

(For Consideration in Food, Brewing and Animal Feed Applications)

I. DESCRIPTION

Protease PLUS is a bacterial alkaline protease produced by the controlled fermentation of *Bacillus licheniformis*. It is an endopeptidase capable of hydrolyzing the interior peptide bonds of protein molecules. The broad substrate specificity of **Protease PLUS** enables the enzyme to effectively hydrolyze most proteins, hemoglobin, casein, egg yolk, soya, and other proteins.

II. PROPERTIES

Appearance:	Light to dark brown liquid (color does not affect or reflect activity)
Odor:	Free of offensive odor
pH (1% soln):	5.0 – 6.0
Guaranteed Activity:	Protease 660,000 DAPU/g

III. EFFECT OF pH

Optimum pH range	9.0 to 10.0
Effective pH range	7.0 to 10.0
pH Stability	6.0 to 10.0

IV. EFFECT OF TEMPERATURE

Optimum Activity Temperature	60°C
Effective Temperature Range	Up to 65°C (150°F)
Temperature Stability	Up to 70°C (158°F)
Temperature inactivation	80°C to 85°C

V. APPLICATIONS

Protein Modification	Where the solubilization and modification of proteins are desirable
Other	Cleaning protein processing equipment. Protease PLUS is compatible with nonionic wetting agents.

VI. USE LEVEL

The exact requirement of **Protease PLUS** depends on the process and the protein substrate concentration, degree of desired protein hydrolyzes, pH, temperature and time. The dosage levels that you could use are 0.3% to 0.7%.

VII. STORAGE STABILITY

In sealed containers, under cool dry conditions, the loss of activity is normally less than 10% over six months. Storage life can be extended by storing under refrigeration at 5°C.

IX. TECHNICAL SERVICE:

Information covering specific applications for this product is available from your Dyadic International sales/technical representative. We will work with your technical personnel to resolve problems and optimize your process.

X. SAFETY AND HANDLING:

For detailed information please refer to the **Protease PLUS** MSDS available upon request.

Nothing disclosed is to be construed as a recommendation to use our products in violation of any patents. The information presented is believed to be accurate. However, said information and products are offered without warranty or guarantee, except as to the composition and purity stated herein since the ultimate conditions of use and variability of the materials treated is beyond our control. We recommend that the prospective user determine the suitability of our materials and suggestions before adopting them on a commercial scale. The goods described herein are sold "as is" and "with all faults". The seller specifically disclaims all warranties in connection with the sale of the goods, both express and implied, including, without limitation, the warranties of merchantability and fitness for any particular purpose, as those terms are defined in the uniform commercial code of Florida. The seller shall not be liable for any incidental or consequential damages whatsoever.