

# PlantPro™ 420MDP

## PP420MDP

### Features/Benefits

- Enhances flavour of plant protein hydrolysates, minimising bitterness and improving taste.
- Efficient hydrolysis, improving solubility and functionality of plant proteins.
- Suitable for use in wide range of plant-based products, including beverages and meat alternatives.

**PlantPro™ 420MDP** is a powerful exopeptidase enzyme specifically designed to optimise the hydrolysis of plant-based proteins. PlantPro™ 420MDP helps overcome key challenges such as off-flavours, poor solubility and bitterness that often affect plant-derived protein ingredients. Plant protein isolates often have stable fibrous protein textures resulting in poor solubility limiting its use in applications. PlantPro™ 420MDP has been specifically designed to achieve efficient hydrolysis of plant proteins improving solubility and reducing viscosity to increase the protein's versatility and use in different ingredient applications including use in plant-based beverages and meat alternative products. The unique combination of peptidase activities of PlantPro™ 420MDP have been proven to be successful in achieving superior plant protein hydrolysates, especially in pea protein for improving functionality whilst maintaining good palatability by reducing the bitterness of the hydrolysate. PlantPro™ 420MDP can be used in combination with an endopeptidase such as PlantPro™ 555MDP or PlantPro™ 580MDP for more extensive hydrolysis of plant proteins.

### Specification

Activity	225 U/g Leucine Aminopeptidase
Biological Source	Microbial
Form	Off-white to brown powder
Application pH Range	7.0 - 9.0
Application Temperature Range	45 - 60°C
Deactivation Conditions	>85°C for 15 minutes

### Application & Dose

The optimum dosage of PlantPro™ 420MDP will depend on the protein substrate and level of modification required. A temperature of 50 – 60°C and pH of 7.0 – 9.0 are recommended for optimal hydrolysis. As an initial dosing guide, PlantPro™ 420MDP can be used at a dose of 0.5 – 2.5% w/w protein content. A typical incubation time may be in the range of 4 – 24 hours. It is recommended that optimisation trials are then performed in order to determine the exact conditions to achieve the desired effect. Please contact Biocatalysts Ltd for further technical support. We offer a comprehensive technical application service partnering with you to test our enzymes with your substrates to help you achieve optimal performance, efficiency, and quality in your products.

### Health & Safety

Always read the Material Safety Datasheet (MSDS) before use and retain. If you are in any doubt about recommended product handling and safety, please contact Biocatalysts before use. Generally, when using enzymes avoid contact with the skin and eyes and do not breathe dusts or aerosols containing them. MSDSs are available in other languages. Please contact Customer Services.

### Storage

Powders: Activity will remain within specification for at least 12 months from the date of manufacture when stored at 0 - 8°C.

### Allergens

Refer to allergen statement.

### Food Status

Material complies with the JECFA/FAO/WHO and FCC recommended specifications for enzymes used in food processing.

### GM Status

This product has been manufactured using fermentation processes of microbial organisms that have not been altered using modern biotechnology. This product does therefore not require labelling as GMO on food labels.

### Quality & Food Safety

Biocatalysts operates a preventative risk-based Food Safety System that ensures the environment and processes are designed to produce safe products every time. FSSC22000 and FSMA compliant.

Compliance - The Company's integrated management system encompasses Quality, Food Safety, Health and Safety and GMP.

Certificates are available on request from the Customer Services Department.

### Availability

Powders: standard 25kg net poly-lined, 100% recyclable cardboard box.