



## Application Data Sheet

DSM Food Specialties B.V.

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# RAPIDASE<sup>®</sup> SMART PLUS

Powerful pectinase for apple juice extraction with a press

## BENEFITS

- High free run juice yield
- Improved filtration
- Enhanced maximal press capacity
- Reduction in pomace stickiness

## PRODUCT DESCRIPTION

Enzyme preparation for food use containing polygalacturonase (pectinase) and pectin esterase (pectinase) derived from a selected strain of *Aspergillus niger*.

## FUNCTION

RAPIDASE<sup>®</sup> SMART PLUS has been developed for the apple maceration and contains distinct pectinases, produced by self-cloned *Aspergillus niger* strains:

- Pectin esterase (PE) for pectin demethylation
- Endo-polygalacturonase (PG), to hydrolyze the soluble pectin after its demethylation by the PE activity

RAPIDASE<sup>®</sup> SMART PLUS does not contain any other pectinase activity (such as pectin lyase) or any of the side activities present in classical pectinases preparations (cellulases, hemicellulases). Therefore, it does not lead to mash over-maceration.

This unique combination of enzymes increases the yield and capacity of equipment which can lead to lower production costs. With a faster degradation of the soluble pectin, the viscosity of the mash is lowered, leading to a higher free run juice volume and better press-ability. This leads to a reduction in pomace cake resistance resulting in drier cake that contributes to faster filtration rates.

## APPLICATION AND RECOMMENDED DOSE RATES

RAPIDASE<sup>®</sup> SMART PLUS must be added during fruit crushing with a metering pump. Just before use, to ensure adequate mixing, it should be diluted in 10 to 20 times its volume of water (see dosage in the table below).

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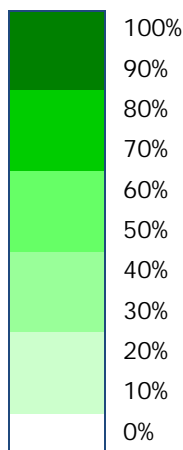


After extraction, the juice must be checked for pectin and starch content. If needed, depectinization of juice can be achieved using RAPIDASE® SMART CLEAR.

Application	Dosage	Recommendation
Beginning of processing season	50-100 g/ton of apples	30-60 min at room T°
End of processing season	100-150 g/ton	30-60 min at room T°

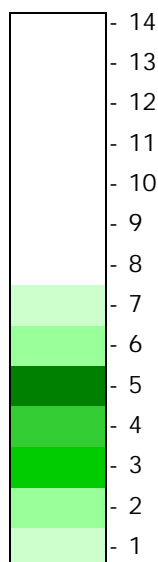
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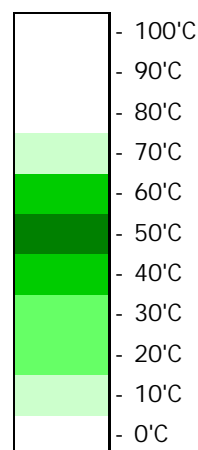
pH Effect on Enzyme Activity

% pH



Temperature Effect on Enzyme Activity

% Temperature



## TECHNICAL SERVICE

This product was developed by our dedicated team of experts. We can help you maximize the efficiency of your process by utilizing our extensive biochemical knowledge and many years of enzyme experience. Please contact your local DSM Food Specialties technical sales representative to receive additional information on meeting your needs.

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