



Application Data Sheet

RAPIDASE[®] SMART CLEAR

Depectinization of apple or pear juice

DSM Food Specialties B.V.

P.O. Box 1
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The Netherlands

www.dsm.com

BENEFITS

- Fast and complete depectinization of apple juice
- Active at high temperatures (up to 60°C)
- Efficient at low dosage

PRODUCT DESCRIPTION

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

FUNCTION

RAPIDASE[®] SMART CLEAR has been developed especially for the full depectinization of apple or pear juice. A prerequisite for juice clarification and concentration is flocculation of the solid particles with complete degradation of the remaining soluble pectin and other colloids. RAPIDASE[®] SMART CLEAR contains specific pectinases and arabanases required for a fast and complete soluble pectin breakdown.

RAPIDASE[®] SMART CLEAR contains an endo-polygalacturonase activity from a self-cloned *Aspergillus* strain and a complete pectinase preparation from a classical *Aspergillus niger* strain (PG, PE, PL, cellulase, hemicellulase). The selected endo-PG fully degrades the remaining soluble pectin, while the broad profile pectinase will hydrolyze other polysaccharides. RAPIDASE[®] SMART CLEAR is therefore used for clarification and to secure the soluble pectin. It aids in the breakdown of the neutral cell wall colloids before ultra-filtration and final concentration.

The composition and structure of apples and pears can vary. Polysaccharides present in the fruit cell wall slowly evolve during fruit ripening and storage. Soluble pectin branched with arabans are increasingly released in the juice during the processing season.

APPLICATION AND RECOMMENDED DOSE RATES

RAPIDASE[®] SMART CLEAR must be added with a metering pump to the fruit juice into the depectinization tank. Just before use, to ensure adequate mixing, it should be diluted in 10 to 20 times its volume of water. RAPIDASE[®] SMART CLEAR is not suitable for the preparation of cloudy apple or pear juices.

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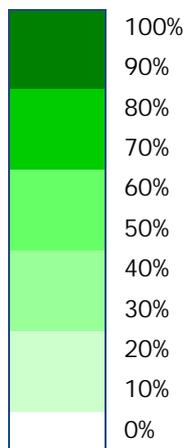
Date of Issue: August 5, 2014



Fruit	Dosage in Juice	Recommendation
Apple or pear	2-3 g/hl	1-2 hours at 45-50°C

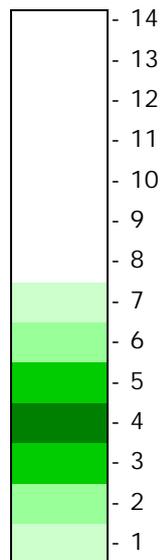
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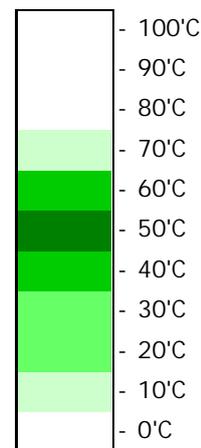
pH Effect on Enzyme Activity

% 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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