



Application Data Sheet

DSM Food Specialties B.V.

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RAPIDASE[®] POWER

Pectinases for maceration and clarification

BENEFITS

- Maximizes yield.
- Rapidly reduces the viscosity of fruit and vegetable mashes.
- Increases decanter, press, and production efficiency.
- Facilitates solids settling and clarification.
- Color stability
- No anthocyanase side activity
- Filtration rate improvement during downstream processing for fruit juice.
- Extends the operating life of the cross-flow filtration membrane.

PRODUCT DESCRIPTION

Enzyme preparation for food use containing liquid pectinases from *Aspergillus niger* and *Aspergillus aculeatus*.

FUNCTION

- RAPIDASE[®] POWER is applicable for the maceration of fruit and vegetable mashes, and the depectinization and clarification of fruit and vegetable juices and concentrates. It hydrolyzes and depolymerizes (breaks down) fruit and vegetable pectin, araban, and other selected complex polysaccharides.
- RAPIDASE[®] POWER rapidly reduces the viscosity of fruit and vegetable mashes in maceration applications. Thus, enhancing the solids separation employing decanters and other centrifugal separation equipment. Because of this the decanter, press, and production efficiency are improved. In addition, the release and recovery of soluble solids, and total juice yields are increased.
- RAPIDASE[®] POWER rapidly reduces the viscosity of fruit and vegetable juices in depectinization and clarification applications as well. This facilitates solids settling, reduces settling time, and enhances juice clarity. The filter efficiency and productivity, and total juice yields are increased. RAPIDASE[®] POWER does not contain anthocyanase activity; providing excellent color retention and stability.
- In addition, it can be utilized in delicate processes for red color and aroma preservation in juice. It is the right enzyme that will achieve the levels of depectinization and color extraction required along with maximum yields.
- RAPIDASE[®] POWER can be used for cold temperature (30°F to 36°F) depectinization and settling to prevent alcoholic fermentation and loss of aromas. It produces stable red color after juice concentration, because it has no anthocyanase side activity.

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HEALTH • NUTRITION • MATERIALS



- RAPIDASE® POWER improves the juice cross-flow filtration rate and overcomes problems arising in downstream processing.
- Using RAPIDASE® POWER extends the operating life of the cross-flow filtration membrane between cleaning cycles.

APPLICATION AND RECOMMENDED DOSE RATES FOR MACERATION AND DEPECTINIZATION

RAPIDASE® POWER is easy to use. It must be added continuously during 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.

Application	Dosage	Recommendation
Fruit / Vegetable Decanter	150 to 225 g/ton	2-3 hours at 50°C (122°F)
Fruit / Vegetable Mash	50-100 ml/ metric ton	1.5-2 hours at 40-50°C (104°F-122°F)
Fruit / Vegetable Juice	20-40ml / 1,000 L of Juice	1.5-2 hours at 40-50°C (104°F-122°F) 16-18 hours at 10-25°C (50°F-77°F)
Grape 1 stage	200-400 g/ton	1 hour at 50°C (122°F)
Grape 2 stages	Pulp 200-400 g/ton Juice 4-8 g/hl	1 hour at 50°C (122°F) 1 hour at 50°C
Grape Clarification	15-40g/hl	10-30 days at (30°F-36°F)

APPLICATION AND RECOMMENDED DOSE RATES FOR FILTRATION

RAPIDASE® POWER is diluted with cold tap water to a 5-10% solution, then added to the juice either at the depectinization stage together with pectinase Rapidase Smart Clear or Rapidase C80Max and the amylase Hazyme® DCL. Or it can be added following depectinization, prior to cross-flow filtration in the feed tank.

Application	Dosage	Recommendation
Apple juice at 11-13°Brix	40-60 ml per m ³	At depectinization stage
Apple pre-concentrate at 20-25°Brix	80-120 ml per m ³	In the cross-flow filtration feed tank

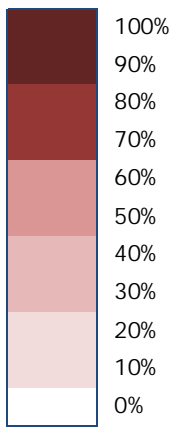
TECHNICAL SERVICE

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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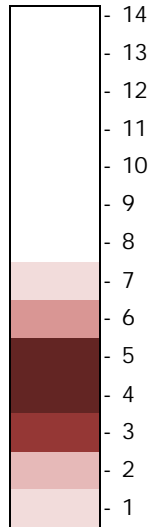
Legend:

Color | Activity



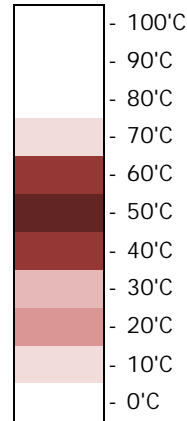
pH Effect on Enzyme Activity

% pH



Temperature Effect on Enzyme Activity

% Temperature



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