



## Application Data Sheet

DSM Food Specialties B.V.

P.O. Box 1  
2600 MA Delft  
The Netherlands

[www.dsm.com](http://www.dsm.com)

# RAPIDASE® SMART COLOR

## PRODUCT DESCRIPTION

RAPIDASE® SMART COLOR is a liquid pectinase obtained from *Aspergillus niger* strain Product is designed to act in acidic conditions and temperature range up to 60°C.

## PURPOSE

Juice and color extraction, juice depectinisation in processing berries.

Extracting juice from most typical red berries but also other, so called “super fruits”, is a process where it is imperative to extract on the quick way as much as possible phenolic compounds from the mash, to obtain a juice with intense color and also rich in natural antioxidants. It is therefore crucial to choose the right enzyme to achieve the required levels of depectinisation and color stability as well as maximum yields and short downstream process.

RAPIDASE® SMART COLOR has been developed especially to improve color extraction from acidic red berries such as blackcurrant, bilberry, cherry and other red berries. It contains very high level of “acid”, endo polygalacturonase required for high yield and fast juice extraction. It also contains other pectinases side activities provided by selected strain of *Aspergillus niger* fermentation to breakdown residual juice colloids and facilitate clarification and filtration of the juice.

Selected enzymatic activities contained in RAPIDASE® SMART COLOR are very active in acidic conditions encountered in red berries pulp or juice with high phenolic content.

Whether used for maceration or depectinisation, RAPIDASE® SMART COLOR breaks down pectin and releases the anthocyanins and other antioxidant phenolic compounds from the fruits. Color is also very stable in time when using RAPIDASE® SMART COLOR

## APPLICATION

RAPIDASE® SMART COLOR is easy to use and can be added using a metering pump to the fruit pulp during fruit crushing or after the hot break, to the maceration tank, to enhance the juice extraction.

Although diligent care has been used to ensure that the information provided herein is accurate, nothing contained herein can be construed to imply any representation or warranty for which we assume legal responsibility, including without limitation any warranties as to the accuracy, currency or completeness of this information or of non-infringement of third party intellectual property rights. The content of this document is subject to change without further notice. Please contact us for the latest version of this document or for further information. Since the user's product formulations, specific use applications and conditions of use are beyond our control, we make no warranty or representation regarding the results which may be obtained by the user. It shall be the responsibility of the user to determine the suitability of our products for the user's specific purposes and the legal status for the user's intended use of our products.

DSM Food Specialties B.V. | A. Fleminglaan 1 | 2613 AX Delft | The Netherlands | [info.food@dsm.com](mailto:info.food@dsm.com) | Trade Register Number 27235314



If necessary for residual pectin break down and clarification, second dosage is done into the juice to the depectinisation tank.

To ensure adequate mixing it is necessary to dilute the enzymatic product just before use in 10 to 20 times its volume of water.

Fruit	Process	Dosage	Recommendation
Blackcurrant	Mash	80 - 300 g/ton	1-2 hours at 45-55 °C (113-131 °F)
	Juice clarification	1-2 g/hl	1 hours at 45-55 °C (113-131 °F)
Bilberry	Mash	80-300 g/ton	1-2 hours at 45-55 °C (113-131 °F)
Other red berries including Cherry, Raspberry, Red Currant	Mash	50-150 g/ton	1-2 hours at 45-55 °C (113-131 °F)
	Juice clarification	1-2 g/hl	1 hours at 45-55 °C (113-131 °F)

Active from: 10 to 60 °C; pH 2.5 to 5.5.

**Note:** Using significant dosage of RAPIDASE® SMART COLOR for the juice extraction increases color and juice yields, reduces also need of enzyme at the clarification stage and shortens process.

## TECHNICAL SERVICE

You can contact your local DSM Food Specialties sales representative to receive additional information on meeting your needs.

Although diligent care has been used to ensure that the information provided herein is accurate, nothing contained herein can be construed to imply any representation or warranty for which we assume legal responsibility, including without limitation any warranties as to the accuracy, currency or completeness of this information or of non-infringement of third party intellectual property rights. The content of this document is subject to change without further notice. Please contact us for the latest version of this document or for further information. Since the user's product formulations, specific use applications and conditions of use are beyond our control, we make no warranty or representation regarding the results which may be obtained by the user. It shall be the responsibility of the user to determine the suitability of our products for the user's specific purposes and the legal status for the user's intended use of our products.

DSM Food Specialties B.V. | A. Fleminglaan 1 | 2613 AX Delft | The Netherlands | [info.food@dsm.com](mailto:info.food@dsm.com) | Trade Register Number 27235314

Date of issue: May 27, 2011