



DANISCO CULTOR

A BROAD RANGE OF PECTINS

Introduction to great pectin series



A Broad Range of Pectins

Danisco offers a complete range of pectin covering a multitude of food and pharmaceutical applications.

Multipurpose Pectins

× High Ester Pectins

- SAG standardized
- Viscosity standardized

× Low Ester Pectins

- Amidated pectins
- Conventional pectins



Specialized Pectins

- | | |
|----------------------------|-------------------|
| ✓ Acidified Dairy drinks : | AMD series |
| ✓ Confectionery : | CF series |
| ✓ Fillings for Bakery: | FB series |
| ✓ Fruit Spreads : | SF series |
| ✓ Stirred Yogurt : | SY series |
| ✓ Yogurt Fruit : | YF Series |



Multi-purpose HE pectins : SAG Standardized

These pectins are standardized on SAG (gelling power) and are classified by the speed at which they set. Most of them are used in high sugar(>60% solids) jams, jellies and preserves.

→ **GRINDSTED™ Pectin RS 400**

Rapid Set : recommended for fruit flotation control

→ **GRINDSTED™ Pectin MRS 351**

Medium Rapid Set

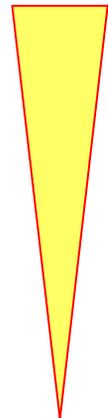
→ **GRINDSTED™ Pectin SS 200**

Slow Set

→ **GRINDSTED™ Pectin XSS 100**

Extra Slow Set : recommended for jellies and portion packs jams and jellies

High DE



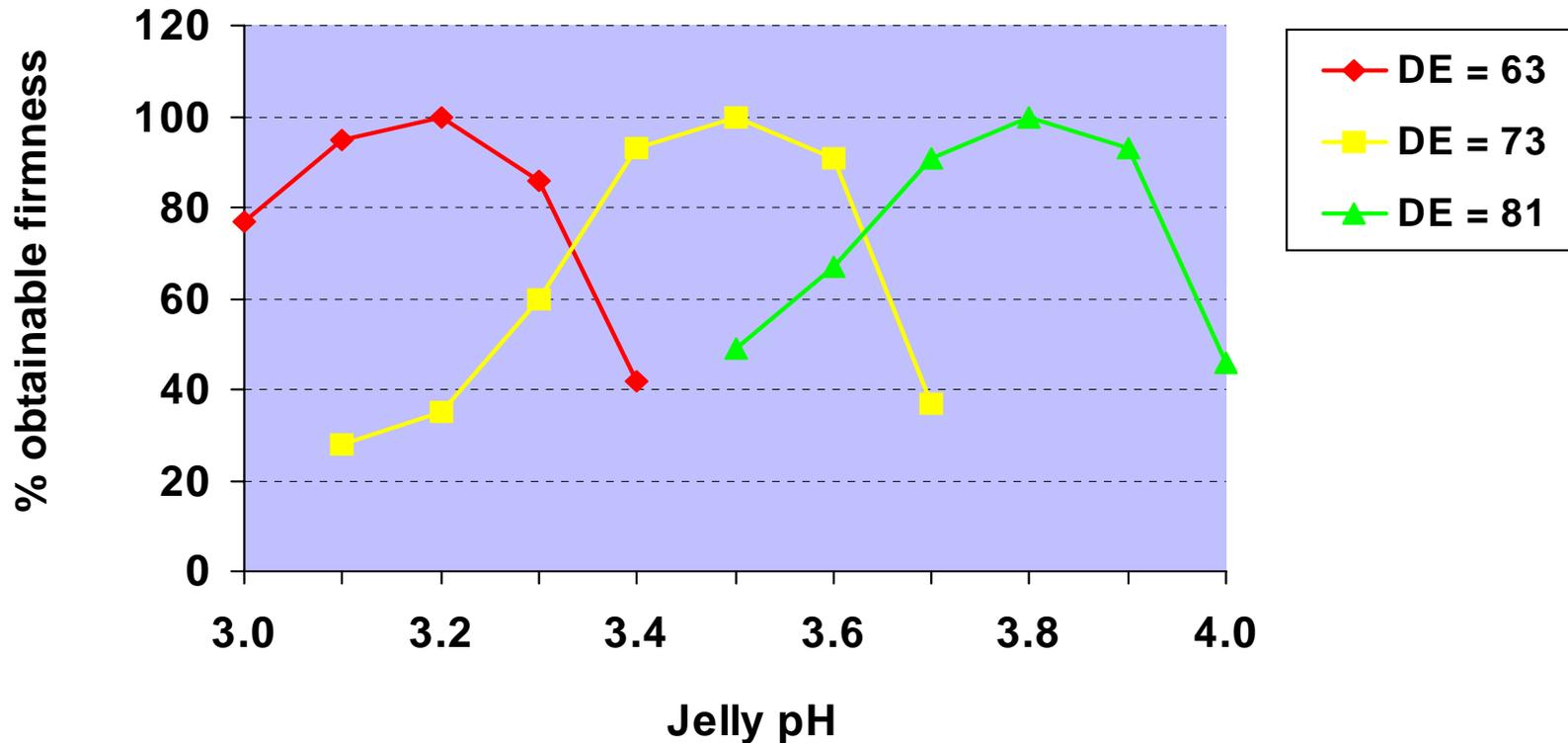
Low DE

Danisco Cultor unique processing of fresh lime peels yields High Ester pectins with great gel strength and superior transparency.



Multi-purpose HE pectins : SAG Standardized

The degree of esterification determines the optimum pH of gelation. So, the choice of the high ester pectin is not only linked to the speed of gelation but also to the desired pH.





Multi-purpose HE pectins : Viscosity Standardized

Mostly used in beverages, to impart viscosity, these pectins can also be used in applications where the viscosity effect of the pectin is dominant over gelling (such as low fat spreads).

One main pectin : **GRINDSTED™ Pectin RS 461**

- ✓ With a high DE to prevent any calcium gelling, this pectin is widely used to restore viscosity in low sugar drinks or in drinks with low juice content.
- ✓ Recommended usage level is around 0.10%.
- ✓ The increase of viscosity is linear with dosage and pectin provides the beverages with a Newtonian behavior thus avoiding any feeling of sliminess (especially compared to gums like Xanthan).



Multi-purpose LE pectins : Amidated

These pectins are standardized on a calcium gelling profile and are widely used in fruit systems such as low sugar jams and jellies (see also the SF series), general fruit preparations (see also the YF series).

→ **GRINDSTED™ Pectin LA 040**

Very low calcium reactive. Recommended for spreadable high sugar jams and fruit preparations for dairy.

→ **GRINDSTED™ Pectin LA 110**

Low calcium reactive. Recommended for Soluble solids above 45%

→ **GRINDSTED™ Pectin LA 210**

Medium calcium reactive. Very versatile.

→ **GRINDSTED™ Pectin LA 410**

High calcium reactive. Recommended for low soluble solids down to 20%. Also used in fruit preparations for Dairy at low solids. Very good fruit suspension ability.

→ **GRINDSTED™ Pectin LA 415**

Very calcium reactive. Recommended for concentrated glazes

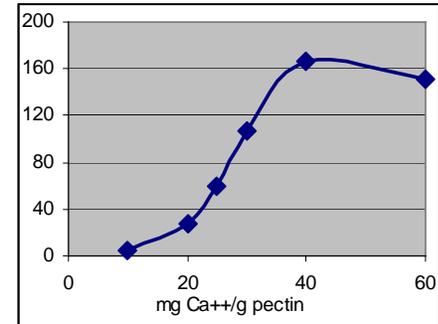


Multi-purpose LE pectins : Conventional

Standardized on a calcium gelling profile . The broad calcium profile and reactivity provides manufacturers with interesting properties in fruit flotation control (high calcium reactive) or very smooth texture (low reactive) which is attractive for fruit preparations.

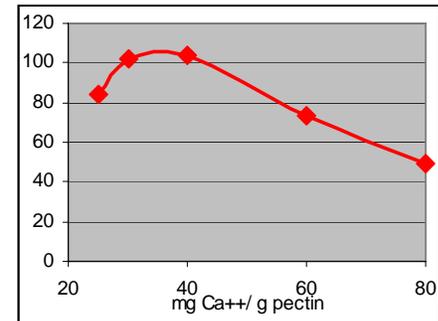
→ **GRINDSTED™ Pectin LC 710**

Low calcium reactive. Very good in fruit preparations and toppings.



→ **GRINDSTED™ Pectin LC 950**

High calcium reactive. Used in fruit preparations and bakery fillings (see also the FB series for more specialized pectins) as well as as help to control fruit flotation in low sugar jams and jellies



<Typical Calcium profiles at 51% SS>



Specialized Pectins

GRINDSTED™ Pectin AMD Series Great Pectins for Acidified Milk and proteins drinks

- ➔ **GRINDSTED™ Pectin AMD 680**
Long reactive blocks make this pectin especially suited for high pH drinks (around 4.4).
- ➔ **GRINDSTED™ Pectin AMD 780**
Recommended for pH 3.8 to 4.2. Your first choice in acidified dairy and soy drinks.
Standardized at stabilization Index at 115
- ➔ **GRINDSTED™ Pectin AMD 781**
pH 3.8- 4.2. Stronger pectin with a standardization at a stabilization index of 140
- ➔ **GRINDSTED™ Pectin AMD 782**
pH 3.8-4.2. Very strong pectin with a standardization at 155 SI.
- ➔ **GRINDSTED™ Pectin AMD 783**
New in 2001. Ultra strong with wide pH tolerance. 175 SI.



Specialized Pectins

GRINDSTED™ Pectin CF Series Superior Pectins for confectionery.

→ GRINDSTED™ Pectin CF 120

Special pectin molecules with low setting temperature at high soluble solids. No buffer salts included. Manufacturer has to add a buffer system

→ GRINDSTED™ Pectin CF 130 B

Low setting temperature pectin including tartrate buffer salts for large tolerance and strong gel strength.

→ GRINDSTED™ Pectin CF 132 B

Low setting temperature, highly economical pectin with potassium salts included. Strong gel strength. Good control of acid addition required.

→ GRINDSTED™ Pectin CF 140 B

Low setting temperature, buffered with citrate salts for a high processability and soft texture.



Specialized Pectins

GRINDSTED™ Pectin FB Series The pectin for bake stability

→ GRINDSTED™ Pectin FB 220

High calcium reactive tailored LC pectins to provide pumpable and bake stable bakery fillings. Especially good at soluble solids of 65% and pH above 3.6

→ GRINDSTED™ FB 850 stabilizer systems

Unique combination of pectin and alginate to provide superior shine and great bake stability even at high soluble solids and lower pH.



Specialized Pectins

GRINDSTED™ Pectin SF Series Pectins of choice for Spreadable Fruits Syneresis control in low sugar jams

→ **GRINDSTED™ Pectin SF 530**

Low calcium reactive. Recommended for soluble solids above 45%. Very high calcium tolerance makes it the pectin of choice for all fruit spreads sweetened with fruit concentrate. Very good syneresis control.

→ **GRINDSTED™ Pectin SF 560**

High calcium reactive for fruit spreads with less than 40%. Great at blocking fruit float and superior syneresis control.

→ **GRINDSTED™ Pectin SF 580**

The pectin added to help control fruit flotation in difficult situations. Very high calcium reactivity makes it react at high temperatures to suspend the fruit. Usually not used alone but in combination with SF 560.



Specialized Pectins

GRINDSTED™ Pectin SY Series Molecular design for Yogurt

→ **GRINDSTED™ Pectin SY 200**

Low calcium reactive pectin specially optimized to provide mouthfeel in stirred yogurt while avoiding graininess. Recommended usage level is below 0.15%. The pectin is added before fermentation.

GRINDSTED™ Pectin LA 410 and GRINDSTED™ Pectin LC 950 can also be used in this application.



Specialized Pectins

GRINDSTED™ Pectin YF Series Texture and Process control for Yogurt fruit

→ GRINDSTED™ Pectin **YF 310**

New !

Low calcium reactive and extremely versatile pectin to be used in all kinds of fruit preparations. Very economical to use. Very calcium tolerant. Usage level between 0.5 and 0.8%.

→ GRINDSTED™ Pectin **YF 450**

Great at low solids with superior fruit suspension control even at low dosage. Requires precision in calcium addition. Usage level between 0.4 and 0.8%

→ GRINDSTED™ Pectin **YF 738**

High ester pectin specially developed for carry through effect. Added at 1 to 1.5% in the fruit preparation, this pectin will also act when blended in the stirred yogurt and increase its viscosity significantly. Great yogurt texture.