Comparative table of gelling agents

	RED ALGAE			CARRAGEENANS		PECTINS	
CHARACTERISTICS	**GRACILA GEL**	**AGAR-AGAR**	**GELLAN GUM**	**PRO-PANNACOTTA**	**KAPPA GUM**	**FRUIT NH PECTIN**	**JAUNE PECTIN**
Proportion	0.1-2 %	0.2-1.5 %	1-2 %	0.2-1.5 %	0.1-1 %	0.5-2 %	1-2 %
Origin	Additive-free gelling agent (E). Whole powdered Gracilaria alga, unprocessed, considered to be an ingredient.	Red alga — Agar-agar (E406).	Obtained through fermentation by the bacteria *Sphingonomas Elodea.*	Derived from red algae, considered to be a carrageenan (E407).	Derived from red algae, considered to be a carrageenan (E407).	Amidated pectin, mainly derived from apples and citrus fruit (E440ii), disodium diphosphate (E450i), tricalcium phosphate (E341iii).	Pectin mainly derived from citrus fruit (E440i) + tetrasodium diphosphate (E450iii), tripotassium citrate (E332ii), citric acid (E330).
Main culinary applications	Jellies, gels, moulds and junkets, compotes, solid caviar, aspics.	Hot and cold jellies. Solid caviar, aspics, grateable jellies.	Heat-resistant jellies, fillings for sponges and pastries.	Soft jellies, like cream caramel, panna cotta or milk pudding, without adding egg. Royales.	Hot and cold jellies, instant glazes, gels.	Neutral, acidic or fruit-based *nappage* glazes, low-sugar jellies and creams.	Gums, *pâte de fruit* and bakeable fillings.
Final texture	Versatile gelling agent. Slower to gel than agar-agar, allowing for textures ranging from soft ones like cream caramel to harder ones like aspic.	Hard, rigid jellies.	Firm, brittle, transparent jellies.	Soft, creamy jellies.	Hard, rigid jellies.	Flexible, creamy jellies.	Soft, flexible jellies.
Recommended activation temperature	70-90 °C	70-90 °C	100 °C	55 °C	55 °C	90 °C	90 °C
Gelling temperature	25-35 °C	25-45 °C	30-50 °C	25-40 °C	25-45 °C	40-80 °C (depending on the pH and amount of sugar and calcium in the recipe).	25-70 °C (depending on the pH and amount of sugar).
Melting point	Thermoreversible between 50 and 60 °C.	Thermoreversible between 60 and 75 °C.	Thermoreversible between 70 and 80 °C.	Thermoreversible between 40 and 60 °C.	Thermoreversible between 45 and 55 °C.	Thermoreversible between 40 and 60 °C.	Thermoirreversible.
Properties	1. Soft or hard textures depending on the proportion. 2. Works with acidic, salty and alcoholic liquids. 3. Translucid jellies. Does not add extra flavour.	1. Hard, transparent jellies. Does not add extra flavour. 2. Works with acidic, salty and alcoholic liquids.	Gellan gum sets very quickly when the gelling temperature is reached. Better gelling properties in the presence of calcium. Forms hard, brittle gels that can be heated at high temperatures without disintegrating.	1. Soft, creamy jellies. 2. If the gel is agitated, it becomes more fluid. Then it recovers its original shape. 3. Its action is boosted with ingredients with a high calcium content.	1. Hard, very transparent jellies. Does not add extra flavour. 2. Its action is boosted with ingredients with a high calcium content.	1. Works with pH levels from 3.5 to 3.7. Minimum 40% soluble solids (sugars). 2. Highly versatile pectin, suitable for glazes, creams and fruit jellies.	1. This specific kind of pectin has a low setting temperature in comparison with standard pectin, and so it offers big advantages when making and handling confectionery. 2. Works with pH levels from 3.1 to 3.8. Minimum 55% soluble solids (sugars).
Freeze resistance **	Low	Low	Medium	Medium	Low	High	High

* With the same proportion of the product, the higher the hydration temperature, the firmer the gel, with less syneresis.

** The freeze resistance not only depends on the texturizing agent, but also on the soluble solid content (sugars) and fat content in relation to the water in the recipe.