



## Functionality

Curdlan gum is tasteless and produces retortable freezable food elastic gels. It is insoluble in cold water<sup>a</sup> but aqueous suspensions plasticize and briefly dissolve before producing reversible gels (that is, curdling, hence its name) on heating to around 55 °C [504]. Heating at higher temperatures produces more resilient irreversible gels, which then remain on cooling, by the aggregation of the triple-helical structures and syneresis. The 'curds' consist of mixtures of single and triple helices. Salts tend to prevent curdlan from gelling and their presence weakens the final gels [504].

Scleroglucan (from *Sclerotinia sclerotiorum*) is also a 1 → 3 β-D glucan but has additional 1 → 6 β-links that confer solubility under ambient conditions but do not significantly interfere with a triple helix gelling process similar to curdlan. Similar polysaccharides can be also extracted from other sources such as waste yeast.

Interactive structures are available ([Jmol](#)).

Source : <http://www1.lsbu.ac.uk/water/hycurdlan.html>