**Revisiting Pectin in Food Applications**

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Pectin is a naturally occurring polysaccharide present in most plants. Pectins are mostly extracted from citrus or apple, and are widely used in food products where they perform as thickeners, stabilizers, or gelling agents. Unlike common food hydrocolloids, pectins are well-perceived by consumers, and are increasingly found in fruit products, confectionary or acidified dairy products, but also in pharmaceutical applications or in cosmetics1-4. The structure of pectins is very complex and is closely related to its properties. For example, the degree of methoxylation (DM) impacts the gelling mechanism of pectin and the final gel macroscopic properties.5, 6 DM also affects the interactions between pectin and proteins and, ultimately, the stabilization of protein aggregates under acidic conditions.7, 8 We found that rationale selection of pectin polysaccharides based on their structure enabled the design of novel systems, outside of the classical functionality of pectins in food products. The relationship between the fine structure of pectin and the physico-chemical properties of the final formulations was systematically studied, and was correlated to sensory attributes. This work demonstrates that careful consideration of pectin structure enables novel formulations using this well-known hydrocolloid.

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