The Structure of Chocolate and its Effect on Bloom Development

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Chocolate has a very complicated structure that is dependant upon solid and liquid oils as well as various different powders. The composition varies from one type to another. Bloom growth is accentuated by migrating oil from a filling. The rate of migration of the oil through a chocolate will be dependant upon the structure of the chocolate and the behaviour of its different components. Study of the crystallisation structure of the chocolate has been achieved by various means, including AFM, ESEM, Confocal Microscopy and Confocal Raman.

Relationships between structure, composition and migration have been studied and the interaction of these has been determined. Relationship between the composition and the bloom development has been measured. Thus ways for assessing the stability and quality of chocolate at an early stage have been developed.