

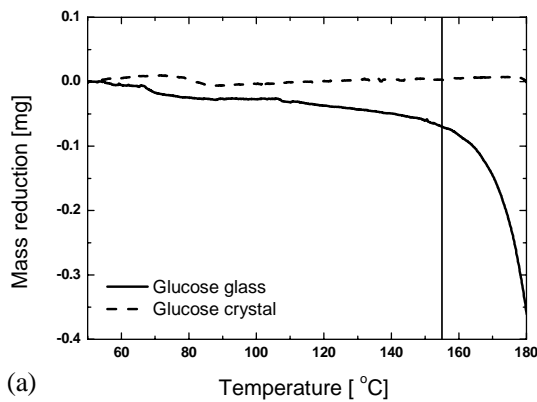
Dehydration Processes in Sugar Glasses and Sugar Crystals

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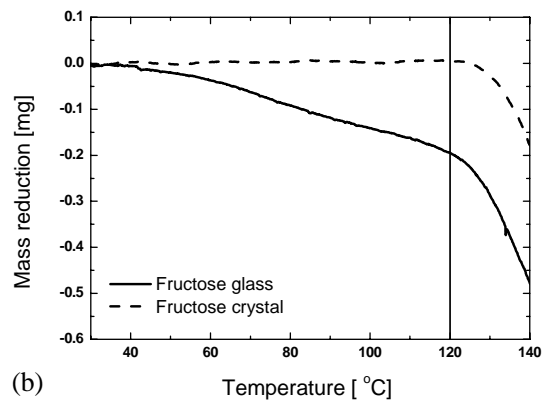
The dehydration process of sugar glasses and crystals was studied by using Thermogravimetry - Differential Thermal Analysis method. The mass of a sugar crystals abruptly decreased at temperatures around the melting temperature but the mass of a sugar glasses continuously decreased from temperatures far below the melting temperature except trehalose. We compared the mass reduction of sugar glasses and crystals at a melting

temperature, found that the mass reduction of fructose, galactose, glucose, sucrose and maltose glasses were larger than that in crystals. But the trehalose crystal showed a larger mass reduction than the trehalose glass. It seems that this peculiar dehydration process in trehalose glass may originate from the protection ability of trehalose during dehydration and ensuing storage.

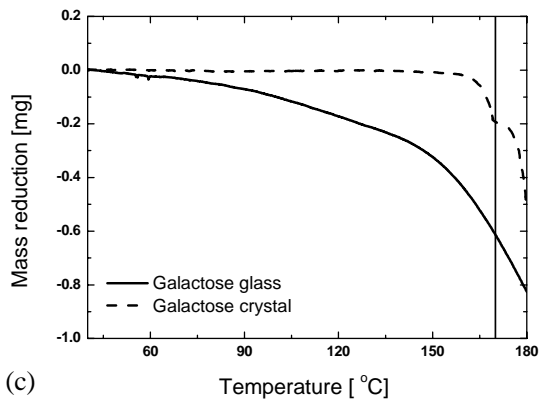
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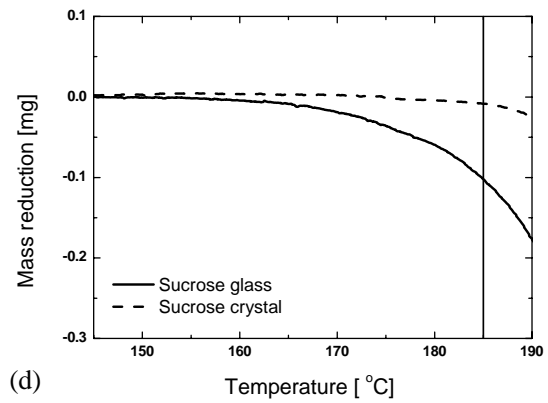
(a)



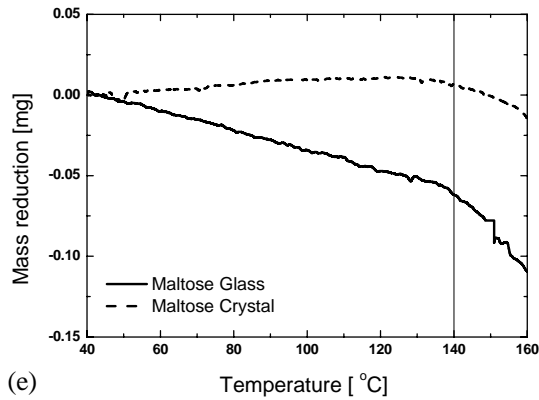
(b)



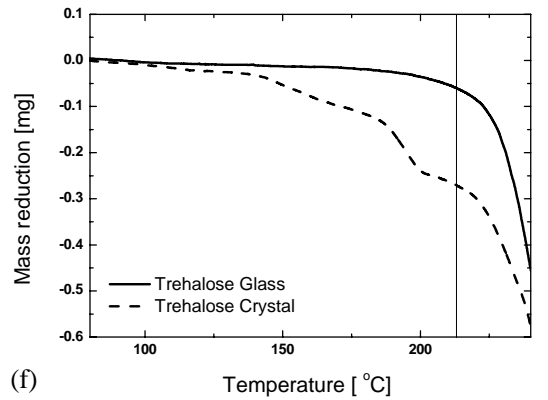
(c)



(d)



(e)



(f)