

Fructose from fruit

For the first time ever, crystalline fructose will be produced from grape juice. The Italian company Naturalia Ingredients s.r.l. is going to start producing crystalline fructose and glucose (dextrose) from grapes in summer 2011.

The idea stems from the owners of the Sicily-based company Cantine Foraci s.r.l., which is a share holder of Naturalia Ingredients. As a winery, Cantine Foraci has many years of experience in the production of concentrated must and grape juice. The group sets great store by the organic character of its products and commits a large part of its resources to research and product development.

The production process consists of raw juice filtration and desalination, following which the glucose and fructose contained in the juice are separated into two fractions in a chromatographic column. After further treatment, both fractions can be separately crystallised in special BMA cooling crystallisers to produce dextrose monohydrate (DMH) and crystalline fructose (XF). BMA provides the know-how and technology for both crystallisation processes as part of separate engineering services.

In a next step, the crystals are separated in BMA centrifugals. In their dried state, these crystals are commonly called fruit sugar and grape sugar.

For the two crystallisation plants for dextrose monohydrate and crystalline fructose, BMA has received an order from Naturalia Ingredients for one vertical OVC cooling crystalliser each and two batch B1300 centrifugals each.

BMA has also been commissioned to provide the engineering for primary crystallisation, crystallisation and separation. Shipping the equipment to the site, supervision of assembly and commissioning will also be taken care of by BMA.

The equipment will be manufactured by BMA in Germany. The crystallisers, with lengths of 17 and 14 metres, will also be fully assembled in BMA's workshop and then shipped to the factory in Sicily as complete units.

During the tender phase, BMA already started crystallisation, separation and drying tests in its research centre, all of which were completed with excellent results. The research centre was also used to produce sample products from the fructose and dextrose syrup that had been supplied by the customer. Naturalia Ingredients could use these samples to contact potential customers at an early stage.

*Marion Lichtenberger
Karl Kremsa*

*First crystalliser
arriving by ship
in Sicily*

