



## The Sweet Taste of Success Promised by HR83

**Granulated sugar at moisture levels above 0.060% risks the development of lumps and the loss of its free-flowing characteristics. The very low moisture content of sugar is tedious to analyse. The Swiss Sugar Company has introduced a halogen moisture Analyzer from METTLER TOLEDO into its QC lab. Enormous time-saving was not the only sweet surprise with the HR83.**

### A Seasonal Business

At the end of September the main operation starts – a three months period during which sugar beets are harvested and delivered to the Swiss Sugar Company. Both of their factories operate around the clock to process the crop either into granulated sugar or into a thick purified sugar concentrate juice that can be stored for later processing. Crystallisation is initiated after the evaporation of water from this concentrate. When the crystals have reached the desired size, they are separated by centrifugation, washed and dried. The final product, granulated sugar, is analysed for its moisture content, which may not exceed 0.060% and ideally should be in the range of 0.020 -0.050%, to prevent any hardening or lumps.

### Analysis Time: From 5 Hours Down to 5 Minutes

The official method defined by ICUMSA\* for the moisture determination of sugar is drying in an oven. The procedure requires approx. 5 hours until the final result becomes available. In the evenings following these busy operation days, moisture is often the last pending parameter during the sugar analysis. Mr. Steiner, quality manager at the facility in Aarberg, now has METTLER TOLEDO's HR83 halogen moisture Analyzer at his disposal and the difference is incredible. The HR83 is ready within seconds, tare and sample weights are determined at the touch of a button and the program runs automatically. The essential fast and uniform sugar crystal drying, critical for acquiring reproducible results, is ensured by the halogen





Sugar beet



technology. The weight loss of the 20 g sample is accurately registered by the 4 place METTLER TOLEDO analytical balance within the HR83. The result in %MC (moisture content) is displayed to the third decimal place within less than 5 minutes. Mr. Steiner was not only impressed by the enormous time-saving, but also with the excellent precision and repeatability of results. “The HR83 gives us results as precise and repeatable as the drying oven – and gets us home in the evening much earlier!”

► [www.mt.com/sugarMA](http://www.mt.com/sugarMA)

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\* ICUMSA: International Commission for Uniform Methods in Sugar Analysis