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Dimensions: 8.5 inch wide, 11 inch tall

Material: Paper, 92 Bright White or better, 75g/m² or heavier

Colors: Color Print on White

Printer: HP Color LaserJet 8550-PS

Finish: None

Adhesive: None

Special Notes: Illustrations are Ref Only ** Not to Scale ** (Shown page 1 of 4)



Application Note

The Challenges of Measuring Moisture Content

By Brady Carter

Moisture content is a measure of the quantity of water in a product and the terms moisture content and water content are often used interchangeably. Moisture content provides valuable information about yield and quantity, making it important from a financial standpoint. In addition, moisture content provides information about texture since increasing levels of moisture provide mobility and lower the glass transition temperature. Moisture content and water activity together provide a complete moisture analysis. Water activity, which provides information about product safety and quality, is often thought to be a more complicated measurement than moisture content. However, this application note will show why moisture content may not be as simple as it seems.

Reporting Method

The concept of moisture content seems basic enough. All that is needed is a determination of the amount of water in a product and compare that to the weight of everything else in the product. While it is simple in theory, further investigation of moisture content demonstrates that for such a simple

concept, it is an extremely complex process to actually obtain an accurate moisture content measurement. For example, moisture content can be reported on either a wet or a dry basis. For the wet basis, the amount of water is divided by the total weight of the sample (solids plus moisture) while for the dry basis, the amount of water is divided by the dry weight (solids only). Unfortunately, in many cases when moisture content is reported, there is no differentiation between the two reporting methods. It is just simply reported as a percentage. Also, moisture content reported on a dry basis can actually result in a percentage value greater than 100%, which can be confusing. Thankfully, it is an easy conversion to go between wet basis and dry basis, however, confusion and potential problems can occur when comparisons are being made between moisture contents that are being reported on a different basis.

Measurement Method

The complications do not end with reporting method. When it comes to determining the amount of water in a product, there are many choices available. The AOAC lists 35