Document Title: Description, AN, Effect of sample size on Aw measurements using the Aqualab Series 3TE		Part # and Rev. 13462-00	
		Release Date:	
Rev.	Description	Revision By	Date

Production Filename: 13462 (In Product Library)

Path to Working Files: DecaDoc\Application Notes\Master

Dimensions: 8.5 inch wide, 11 inch tall

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

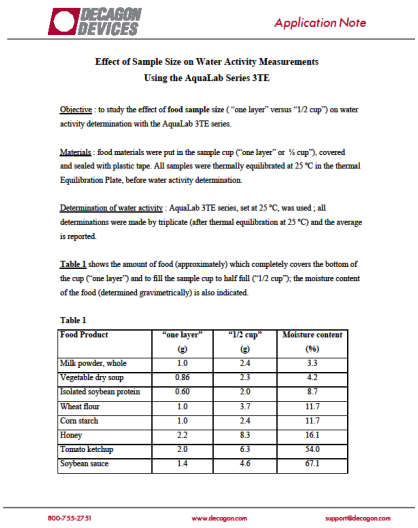
Colors: Color Print on White

Printer: HP Color LaserJet 8550-PS

Finish: None

Adhesive: None

Special Notes: Illustrations are Ref Only ** Not to Scale ** (Shown page 1 of 2)



DECAGON DEVICES Application Note

Effect of Sample Size on Water Activity Measurements Using the AquaLab Series 3TE

Objective : to study the effect of **food sample size** ("one layer" versus "1/2 cup") on water activity determination with the AquaLab 3TE series.

Materials : food materials were put in the sample cup ("one layer" or ¼ cup"), covered and sealed with plastic tape. All samples were thermally equilibrated at 25 °C in the thermal Equilibration Plate, before water activity determination.

Determination of water activity : AquaLab 3TE series, set at 25 °C, was used ; all determinations were made by triplicate (after thermal equilibration at 25 °C) and the average is reported.

Table 1 shows the amount of food (approximately) which completely covers the bottom of the cup ("one layer") and to fill the sample cup to half full ("1/2 cup"), the moisture content of the food (determined gravimetrically) is also indicated.

Table 1

Food Product	"one layer" (g)	"1/2 cup" (g)	Moisture content (%)
Milk powder, whole	1.0	2.4	3.3
Vegetable dry soup	0.86	2.3	4.2
Isolated soybean protein	0.60	2.0	8.7
Wheat flour	1.0	3.7	11.7
Corn starch	1.0	2.4	11.7
Honey	2.2	8.3	16.1
Tomato ketchup	2.0	6.3	54.0
Soybean sauce	1.4	4.6	67.1