

Document Title: AquaLab Verification Standards Application Note		Part # and Rev. 13430	
		Release Date: 11/11/08	
Rev.	Description	Revision By	Date
-02	New font, logo review	DDH	5/10/11
-03	New Format	DDH	5/16/11
Date -- Time	Uploaded App Note to repository. Available at http://publications.decagon.com . Please ask archivist for previous versions or use Beanstalk application.	NJR	10/28/13

Decagon and Vendor Production File Name:

http://manuals.decagon.com/Application Notes/13430_AquaLab Verification Standards_Print.pdf

Dimensions: 11 in x 8.50 in

Colors: Full Color

Material: 80 lbs/ 216 g/m² Long Grain White (14583)

Finish: Score down center

Adhesive: None

Serialization: None



Serial Number Example: NA

Serial Number Text: NA

Special Notes: Pages are duplexed front to back

Illustration is Ref Only

Not to scale

	<i>Application Note</i>		<i>Application Note</i>
<p>1. Place the verification standard (do not start with water) in the AquaLab for measuring. When a final reading is reached, check it against the value listed above. If it is within ± 0.003, place your second solution in the drawer for testing. It should read the value ± 0.003 listed in the table above. If the readings are within the expected values your verification is complete.</p> <p>2. If the first solution does not read within ± 0.003 of the expected value, then you need to adjust the linear offset so that the solution reads correctly. Instructions for this are in your operator's manual. When you are finished measuring both standards the readings should be within ± 0.003 of the predicted values.</p> <p>References AOAC, Method 973.1ED Preparation of Reference Salt Slushes, 1995. Official Methods of Analysis of AOAC International, 16th Ed. AOAC International, Arlington VA. Campbell, C.S. and W.H. Gardner, 1971. Psychrometric measurement of soil water potential: temperature and bulk density effects. Soil Sci. Soc. Am. Proc. 35:8-12. Greenspan, L. 1977. Humidity fixed points of binary saturated aqueous solutions. J. Res. National Bureau of Std., A. Physics and Chem., 81A:50-96. Lang, A.R.G. 1967. Osmotic coefficients and water potentials of sodium chloride solutions from 0 to 40°C. Aust. J. Chem. 20:2017-2023. Robinson, R.A. and R.H. Stokes. 1965. Electrolyte Solutions. Butterworths, London.</p>		<p>AquaLab Verification Standards</p> <p>Using the AquaLab is easier than ever. Pre-packaged standard salt solutions are immediately available for performance verification, saving you time and money. Validation and documentation for GMP and GLP has also become easier. Operate your instrument with certainty and insure the quality of your food product by using low cost precision salt solutions.</p> <ul style="list-style-type: none"> • No need to purchase and store reagent grade salts. • No additional laboratory equipment necessary. • Avoid solution handling and mixing errors. • Save technician time. <p>The AquaLab should be verified against a known salt standard daily. For high use or batch processing, the instrument should be checked regularly against a known salt standard of similar water activity. Checking the water activity of a standard solution will alert the operator to the possibility of contamination of the unit or shifts in the linear offset from other causes.</p> <p>Now, you can verify the AquaLab performance with confidence. Performance Verification Standards come in four water activity levels; 0.904, 0.760, 0.500, and 0.250 a_w. The standards are produced under a strict quality assurance regime. The accuracy of the standards is verified by an independent third party and are shelf stable for one year. Order your verification salt standard of similar water activity today.</p> <p>Uncertainties Using Saturated Salt Solutions The water activity values listed in our operator's manual for saturated salts were reprinted from Greenspan (1977). His method for determining water activity was to combine all of the available data from tests by other researchers. He did not set up any experiments of his own. The uncertainty he published is due to variation among the</p>	
<p style="font-size: small;">Decagon Devices, Inc. AquaLab Division 2365 NE Hopkins Court Pullman, WA 99163 509-882-2756 support@aqualab.com</p> <p style="font-size: x-small;">13430.02 © 2011 Decagon Devices, Inc. Printed in USA</p>			