

Water Activity Standard Methods

Method	Publication Date	Industry	Requirements
AOAC 978.18	1990	Food	Saturated salt solutions for standards, electrolyte polymer and dew point sensors acceptable.
ISO18787	2017	General	Temp control +/-1C, resolution 0.0001 a _w , stability determined by 0.0003 a _w difference for 3 measurements or 1 minute, not sensitive to volatiles, saturated salt standards
ASTM D8196-18	2018	Cannabis	Temp control +/-0.1C, resolution 0.001 a _w , accuracy +/-0.005 a _w , range 0.40 to 0.80 a _w ,
Compendium of Micro Methods Chp 68	2015	General	Requires an accuracy of +/-0.003 a _w
USP <922>	2021	Pharma	Does not specify an accuracy requirement, but does give recommendations for application
MFLP_63 Canada	2006	Food	Procedure for using Novasina to measure water activity

Water Activity Testing in Government Regulations

Agency	Application	Industry	Testing Requirements
FDA	In HARPC, serves as a monitoring tool for water activity as a preventative control for microbial growth	Food	Water activity test results must be verified, confirming that all equipment, is operated, maintained, and calibrated properly.
USDA	Monitoring tool for Generic HACCP plans	Meat	Water activity testing should be done according to accepted standard methods
ASTM D8197-18	Monitoring tool for preventing microbial growth	Cannabis	Water activity testing should be done according to ASTM D8196-18
USP <1112>, <51> < 795>, and < 797>	Justification for reduced microbial testing and to maintain drug stability	Pharma	Water activity testing should be done according to USP <922>
ICH	Part of Decision Tree #6 and #8 to justify reduced microbial testing	Pharma	Water activity testing should be done according to USP <922>
ISO29621	Water activity testing can identify products with low microbiologically risk.	Cosmetics	Water activity testing should be done according to ISO18787
Canadian FIA	Water activity determines potentially hazardous foods	Food	Water activity testing should be done according to accepted standard methods
UN Food and Ag Organization	Water activity can be used for food preservation	Food	Water activity testing should be done according to accepted standard methods