Thermo SCIENTIFIC

Karl Fischer Titrator

Log # KF1579

Overview The moisture in starch powder in gelatin capsules was determined by Karl Fischer titration on the Orion Turbo2 Blending Volumetric Titrator equiped with a high speed blender. Methanol-formamide mixture was used as the solvent.

Sample Starch in gelatin capsules

Industry PHARMACEUTICALS

Typical moisture 8 - 9 %w/w

Sample size 0.3g

Summary of analytical procedure Fill the vessel with 300 mL of solvent mixture. Calibrate with 25uL of DI water. Start titration in Bgrd-Samp-Bgrd mode. Accurately weigh 1 capsule and enter total weight when display requests.
Add starch from the capsule to the titration vessel. Reweigh the empty gelatin capsule and enter as holder weight when display requests.

Method Parameters

Instrument	Turbo 2 Volumetric Karl Fischer	**Stirrer/blender speed**	3
Volumetric Reagent	HYDRANAL®-Composite 5 RDH 34805*	**Extract time**	10 min.**
Volumetric Solvent	1:1 Methanol:Formamide (Karl Fischer grade)	**Mode of analysis**	Bgrd-Samp-Bgrd
Endpt/Step Level	8/ +5	**Vaporizer oven**	N/A
Endpt Time	10 sec.	**Result units**	% w/w

Results

# of Trials	1	**Mean Value**	8.5 %	**C.V.**	N/A

Comments *Or use AquaStar* Composite 5 from Fisher (MAX1698A-6). **Turbo time can be reduced to 5 minutes if the titration is carried out at 50°C. Use the Turbo2 Water-Jacketed Vessel with circulating bath to perform calibration and analysis at 50°C.

Cross-reference log # KF1142