

KF Application Note No. K- 3

Title: Water in ammonium and potassium peroxodisulphate (persulphates)

Summary: The water content of ammonium and potassium peroxodisulphate is determined according to Karl Fischer using two-component reagents. To prevent unwanted side reactions the determinations are carried out at -20 °C. Because the potassium salt is insoluble in the solvent, a high-frequency mixer is used to disintegrate the salt particles.

Sample: Ammonium and potassium peroxodisulphate

Sample Preparation: none

Instruments and Accessories: 701 KF Titrino or 720 KFS Titrino, 703 Titration Stand, printer, Polytron PT 1200 Disintegrator, low temperature circulation system

Analysis: Wait for a steady drift below 6 uL/min, then add ca. 1 ... 1.5 g sample using a glass weighing spoon.
An extraction time of 2 min with intensive stirring (Polytron PT 1200, speed «3») has been used for the automatic determination.

Reagents:

Solvent: 50% formamide + 50% Hydranal Solvent (Riedel-de Haën)

Titant: Hydranal Titrant 5 (Riedel-de Haën)

Results: $(\text{NH}_4)_2\text{S}_2\text{O}_8$: AVG(5) = 377 +/- 41 ppm water
 $\text{K}_2\text{S}_2\text{O}_8$: AVG(5) = 419 +/- 28 ppm water

Settings: 701 KF Titrino

>titration parameters

extr.time	120 s
stop crit.:	drift
stop drift	20 uL/min

>preselections

conditioning:	on
req.smpl size:	on
report:	full