

Application

TitroLine alpha *plus*
TitroLine *KF*

**Determination of Water
according to KF in spices**

SCHOTT
Instruments

USE

Determination of water in spices such as pepper, chillie powder or paprika powder.

APPLIANCES

TitroLine alpha KF- plus Module, or
Titroline KF
Erlenmeyer flask 200 ml with stopper.
option for some samples: Heatable magnetic stirrer TZ 1870

ELECTRODES

Electrode: KF 1100

CHEMICALS

Solvent: dried methanol/Composolver E or solvent for 2 component systems and sometimesformamide (2/1)

Titrant: single component or two component reagent (1 ml = approx 5 mg H₂O)

DESCRIPTION

Food stuff such as pepper, chillie powder or paprika powder can normally not dissolved in methanole or any other solvent. But the water can be extracted

- a) externally using an erlenmeyer flask (**pepper, paprika powder**)
- b) add formamide and/or
- c) a using a heating source (max 50 °C) to heat up the sample. (**chilli powder or extract**)

The solvent is added with the pump. Set the knob of the heating source (heatable magnetic stirrer) to 50 °C. Wait 3-4 minutes. Select the method. Subsequently, the KF method is started on the TitroLine alpha plus or TitroLine KF, and the solvent is automatically conditioned. Press <ENTER> or <START> and insert the sample ID. Press again <ENTER>.

Weigh appr. 2 g of the sample in a glass weighing funnel or something suitable on an analytical balance. The sample have to be crushed in small pieces before. Press the tara button. Remove the septum of the vessel and put the sample into the vessel. The glass funnel is then placed again on the balance. Read the absolute weight from the balance display. Press the print button of the balance if the balance is connected

to the Titrator or use the keyboard to insert the weight into the TL alpha plus/TitroLine KF. Confirm with <ENTER>.. The TL alpha plus/TitroLine KF starts now automatically the titration.

Electrodes handling

You can store the double platinum electrodes wet (in the titration vessel) or dry.

NOTES

If you should have further questions with respect to the application, please contact the Application Department of Schott-Geräte; tel.: **+49 6131 66 -5118 or -5062**

LITERATURE

Also refer to:

Hydranal®-Workshop - Water Reagents according to Eugen Scholz for Karl-Fischer titration, Riedel-de-Haën.

Water determination by Karl-Fischer titration, Theory and Practice, G. Wieland, GIT Publishers.

TitroLine alpha plus Method and TitroLine KF methods

You can use the standard parameters settings first in the Titroline KF and TitroLine alpha plus.

The extraction time for samples with external extraction is only 5 seconds. If the sample is added directly into the titration vessel then the extraction time could be about 1-3 minutes. – or even longer.

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