



Centrifuge adapter and sample holder for the determination of the water retention value (WRV) according to ISO 23714:2007 in the manufacture of pulp and paper

The water retention value (WRV) is an important parameter in the manufacture of pulp and paper. It is an indication of the ability of a sample of wood fibre or pulp mass to retain water.

The WRV changes in the course of the manufacturing process – for instance it rises continuously during the grinding process as a result of the increasing separation into fibres. The WRV consequently provides valuable information on the impact of the individual steps in the digestion process on the fibres produced and to what degree the pulp mass is suitable for paper manufacture.

The method used to determine the WRV has been standardized and is described in the international standard ISO 23714:2007. Whereas in the past the sample holders were specially manufactured and therefore expensive, or had to be fabricated for their intended use, Hettich now offers a centrifuge adapter with sample holder type A.1 as given in ISO 23714:2007 as standard centrifuge accessories.

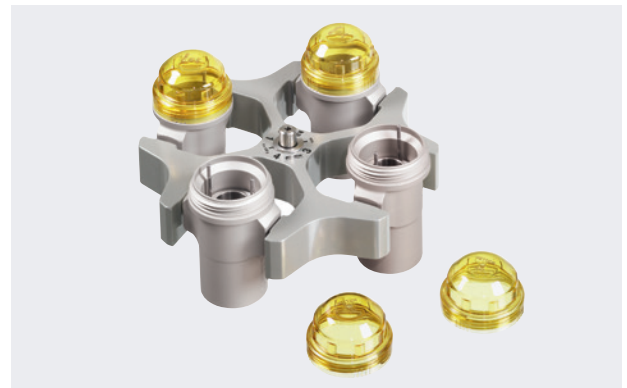
## Hettich products to determine the WRV in accordance with ISO 23714:2007



**UNIVERSAL 320 R**  
Benchtop centrifuge



**Carrier 1495 and insert SK 05.09**



**Swing-out rotor, 4-place**  
with carriers 1495 and lids 1492



**SK 05.09:** plastic adapter and sample holder

## The sample holder

The sample holder has 3 parts, all of stainless steel:

- A steel cylinder, 35 mm in height, with an internal diameter of 25 mm
- A fine-mesh gauze, with an aperture of 125 µm and a mesh diameter of 90 µm
- A sieve insert; the precision-fit gauze is laid on the perforated base of the sieve insert; the stainless steel cylinder holds the sample under analysis and is placed in the insert.

For centrifugation, the filled sample holder is placed in a plastic adapter that retains the water released during the centrifugation process.

The entire insert fits into a standard centrifuge carrier and can be sealed with a lid.

Steel cylinder

Steel gauze

Sieve insert



3-part stainless steel sample holder

## Summary of the advantages of the sample holder

- The sample holder and filter gauze are of stainless steel
- The centrifuge carrier remains free of corrosion since no liquid accumulates in it – it is retained in the plastic adapter
- Simple and safe to use
- The sample can be easily removed from the sample holder after centrifugation for further processing
- Easy to clean
- The carrier lid reliably prevents evaporation during centrifugation
- Fits into standard centrifuge accessories

## Method

See ISO 23714:2007

(Pulps – Determination of water retention value)

## Ordering information

Centrifuge	Cat. No.
UNIVERSAL 320 R	1406
Rotor, 4-place	1494
Carrier	1495
Lid for carrier 1495	1492
Entire insert: Sample holder with adapter	SK 05.09

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