

## X-RAY DIFFRACTION

# **Specimen Holders for the Benchtop XRD Sample Changer**

# Product Sheet 49

X-ray diffraction provides qualitative and quantitative phase analysis without the need for complex sample preparation. However, the best analytical results are obtained when the specimen preparation and the chosen holder are matched to the material's properties.

All our specimen holders and mounting tools are designed to facilitate handling of various materials for XRD and to ensure reproducible specimen preparation.

This product sheet gives an overview of our 32 mm diameter specimen holders available for the D2 and D6 PHASER with sample changer. In addition to the specimen holders shown here, dedicated solutions can be realized upon request.

## The D6 PHASER sample changer

- 12 positions sample changer,
   Ø 32 mm diameter holders
- Programmable rotation, fully integrated in DIFFRAC.SUITE software



## **Standard sample holders**

Standard specimen holders for easy preparation of powder specimens, such as geological samples. Solid pieces, e.g. steel coins, are set to the correct sample height in deep holders, thus avoiding peak-shifts. Steel specimen holders with different sample reception depth for powder samples or solid specimens.





## Left A26D332 (set of 6)

Sample reception: Ø 25 mm, 1 mm depth.

## Right A26D330 (set of 6)

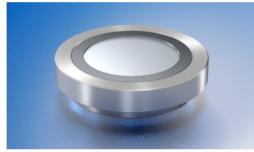
Sample reception: Ø 28 mm, 3 mm depth. A26D333 (set of 6) Sample reception:

Ø 28 mm, 4.5 mm depth.

## Low background sample holders

Pharmaceutical compounds and other weakly absorbing materials are best prepared on low-background silicon holders, thus minimizing sample related peak broadening. Si low background holder for small specimen amounts, flat or with cavity.





#### Left A26B52 (1 piece)

With flat Si insert. Sample reception: Ø 25 mm, flat.

#### Right A26B60 (1 piece)

With Si insert with cavity.
Sample reception:
Ø 20 mm, 0.5 mm depth.

## Airtight sample holders

Air- and moisture sensitive samples can be protected in a range of airtight holders by covering them with e.g. a Kapton film. These holders also limit operator contact with hazardous chemicals. Available as standard holder or with Si low background insert. Separate mounting tool A26B54 required for sample preparation.



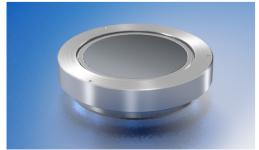


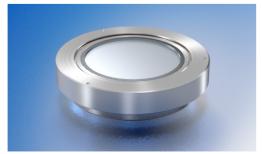
#### Left A26D339 (set of 6)

Sample reception: Ø 21.5 mm, 1.5 mm depth.

#### Right A26B54

Mounting tool for airtight sample holders. Required for A26D339, A26B53, A26B65.





#### Left A26B53 (1 piece) A26D337 (set of 6)

With flat Si insert. Sample reception: Ø 21.5 mm, flat.

#### Right A26B65 (1 piece) A26D338 (set of 6)

With Si insert with cavity.
Sample reception:
Ø 20 mm, 0.5 mm depth.

## **Backloading sample holders**

Peak intensity variations arising from preferred orientation effects can be reduced with the backloading technique, which improves the random orientation of crystallites.

Steel specimen holders for backloading. Requires separate mounting tool A26B63 for sample preparation.





#### Left A26D334 (set of 6)

Sample reception: Ø 25 mm, 2.5 mm depth.

#### Right A26B63

Mounting tool for backloading sample holders.
Required for A26D334.

## Filter paper sample holders

Dedicated sample holder to measure filter papers, e.g. for applications following NIOSH 7500 norm for respirable quartz. Includes Al-support plate that can be used for absorption correction. Specimen holder fits Ø 25 mm filter papers. Requires separate mounting tool A26D336.





#### Left A26D335 (set of 6)

Sample reception: Filter papers of Ø 25 mm.

#### Right A26D336

Mounting tool for filter paper sample holders.
Required for A26D335.

## Clay sample holders

Proper for mounting of oriented clay specimen slides to the correct sample height minimizes peak-shift and facilitates phase-identification.

Dedicated steel specimen holders for oriented clay slides. Required mounting tool and 12 glass slides included in set A26B69.





Adapter to run Ø 32 mm specimen holders in sample stages supporting in Ø 51.5 mm specimen holders.

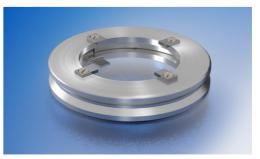


## Left A26B69 (set of 6)

Sample reception: Glass slide of Ø 25 mm. 12 glass slides included.

#### Right

Mounting tool for clay sample holders. Included in A26B69.



#### A26D340 (1 piece)

Adapter ring for sample holders of Ø 32 mm.

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