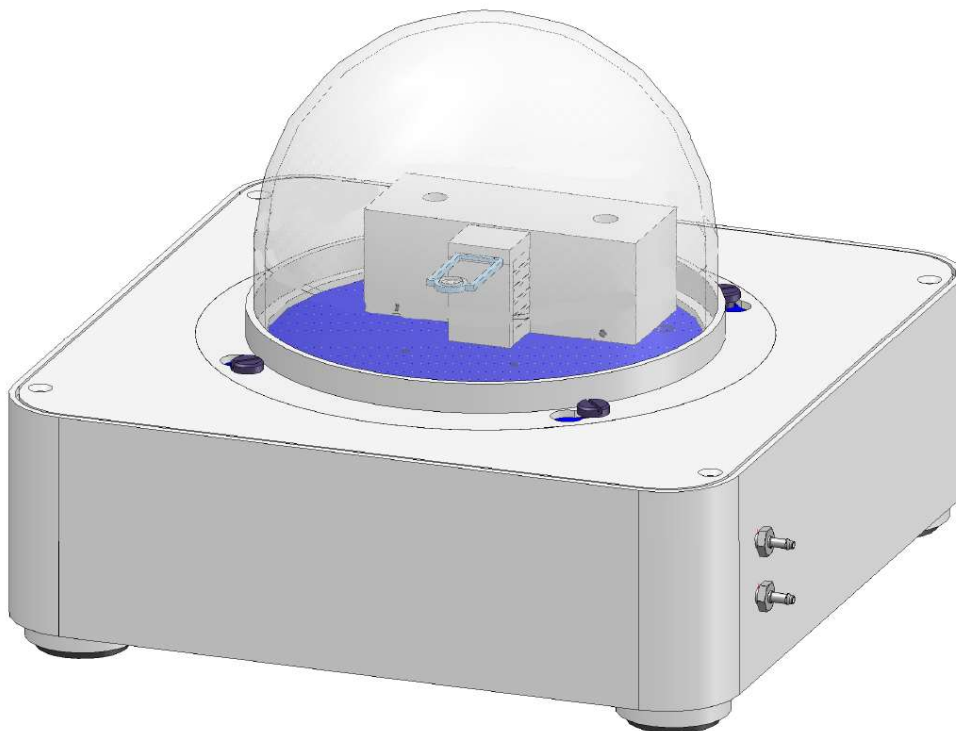


How To Handle foils with Chip DSC



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Date: 16.09.2021

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1. General information

This manual is a short description for handling foils with the Chip DSC. Keep in mind best measuring results require the sample to be in intimate contact with the crucible bottom. Naturally, the best setup conditions depends on your sample, shape, thickness, temperature range and so on. For more Information, read the other available instructions about software or specific manuals for the Chip DSC.

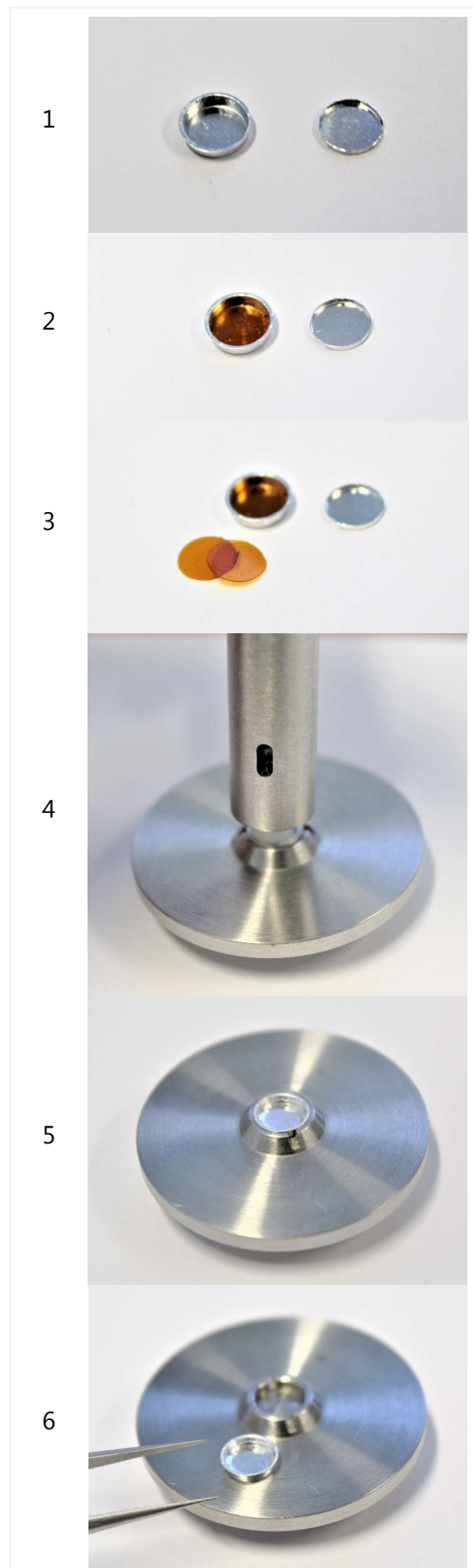
2. choose the right crucible

2.1 diameter



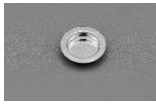
- Make sure the crucible fits in your sensor (if you want to use third party crucibles)
- The shape at the bottom must be as flat as possible to have the best possible contact to the sensor
- The height of the crucible shouldn't be high to minimize thermal gradient through the height.
- Check our recommendation at 2.3

2.2 lid

- It is recommended to use a lid while measuring foils.
- Often the foil change its shape while heating. This undesirably changes the sample-crucible contact surface giving poor DSC results.
- Two of our lid types are crimped into the crucible. Using this you can be sure, the foil is hold down to the bottom by this lid



2.3 Overview for recommended crucibles

Name	Best.-Nr.	Description	Picture
Al crucible for foils with lid	302930	The most recommended crucible for measuring foils. It is very flat with a lid that holds down the sample when sealed.	
Al crucible for small samples with lid	302930	The crucible with smaller shape but higher than the others. The lid holds down the sample when sealed.	
Al crimpable crucible 40µl with lid	30293045 + 30293044 or 30293046	The multifunctional crucible (40µl) when you are sure, the shape of your sample doesn't change while heating. Hermetic sealing possible.	
Request the compatible crimp-tool for your crucible at your supplier or sale@linseis.com			

3. prepare your sample

3.1 cut by side cutter or scalpel

- A scalpel or utility knife can be used to cut the foil sample to fit into the crucible.
- Make sure the cut pieces are small enough to fit in the crucible but large enough you have a good contact to the bottom with just one sample layer.
- To increase sample weight it is possible to use more layers as well.



3.2 punch out your sample

- It is possible to punch out fitting circles of your foil using punching tools.
- Make sure the diameter of your punching tool fits with the diameter of your sample so they can lay flat in your crucible.
- Using more layers of the punched foil is possible.
- Inspect the foils after punching to be sure they are not cupped in shape.



3.3 use microtome

- The third option for creating thin film and foils is to use a microtome
- While using this professional laboratory equipment make sure the foil is thick enough to get enough mass so you can detect the transition you are looking for
- Using more layers of the cut foil is possible.



4. use the right weight for your sample

- Use enough sample so the transition you want to see, e.g. melting or glass point is clearly visible
- Too much sample can cause the sample lid to budge out from sample expansion while heating.
- The right sample weight depends on thickness and density of your sample
- Recommended are ~2-5 mg for thin foils