

User Instructions and Care of the 7mm Pellet Die Assembly P/N GS03950 for the 2T Mini-Pellet Press P/N GS03940

The 7mm Pellet Die Assembly P/N GS03950 has been designed for specific use within the Specac 2T Mini-Pellet Press P/N GS03940 for the production of 7mm diameter KBr pellets for use in infrared spectroscopy. (See User Instructions for the Basic Solids Pack variants supplied by Specac. The bubble numbers shown below correspond with the same numbers found with these User Instructions.)

Sample Preparation Stages for the 7mm Die Assembly

A complete 7mm pellet die assembly consists of a central pellet ring holder (6), top anvil (8), a bottom anvil (9) and a clear Perspex extractor ring cap (10). (See Fig 1.) The top anvil (8) has a longer central “plunger” section than the bottom anvil (9).

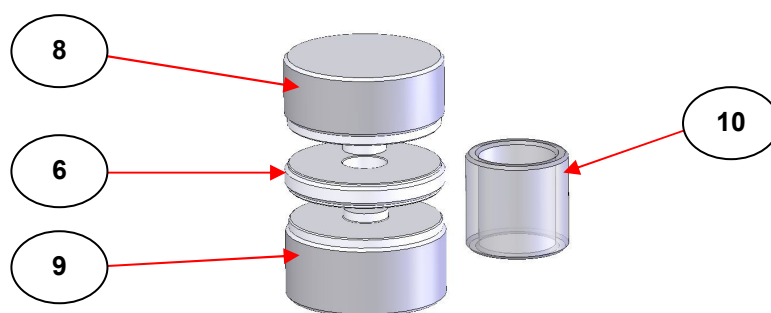


Fig 1. 7mm Pellet Die Assembly Complete

To make a 7mm diameter KBr pellet, a suitable quantity of KBr powder alone or a mixture of a solid sample homogeneously distributed within KBr powder is placed within the hole of the pellet ring holder (6) when placed on the bottom anvil (9). (See Fig 2.) The central hole is filled with a quantity of sample mixture up to the top surface level of the pellet ring holder (6).

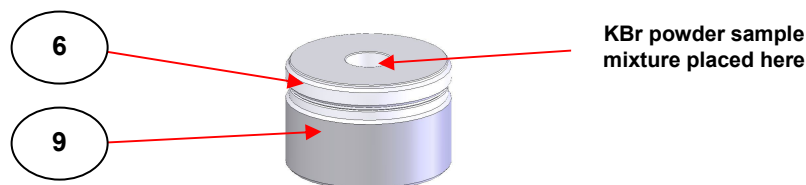


Fig 2. 7mm Pellet Die Ring Holder (Body) on Bottom Anvil

The top anvil (8) is then placed carefully over the hole with the sample mixture (build sequence as shown in Fig 1.) and the powder/mixture is compressed between the top anvil (8) and bottom anvil (9) plunger pressing surfaces, when the complete 7mm pellet die assembly with a sample is transferred to the 2T Mini-Pellet Press for pressing.



*It is **very important** that the plunger pressing tip of the top anvil (8) is placed correctly within the hole of the pellet ring holder (6) and remains in position from transfer of the complete die assembly into and prior to compression of any load being applied from the 2T Mini-Pellet Press. Any KBr mixture should be sufficiently soft to allow for some partial pre-compression by hand to allow the plunger tip to be located correctly as required. If any of the 7mm pellet die parts become damaged because of clear evidence of incorrect use and care during the sample preparation process for pressing, **any warranty period on the die assembly will be rendered null and void.***

Care of the 7mm Die Assembly

Cleaning of Pellet Die Parts and KBr Pellet Removal from the Pellet Ring Holder

When the KBr pellet sample being held in the die ring holder (6) has been analysed, the KBr sample itself must be removed from the die ring holder (6) for pressing of a new sample into the same die ring holder. There are two spare die ring holders (6) P/N GS03951 provided with the Basic Solid Pack of item parts to use for preparation of a second or third sample, if one of the die ring holders (6) is already being used for spectral data collection.

Note: *It is good practice to keep the complete 7mm pellet die assembly parts clean, dry and free from any KBr sample contact when not in use. Thoroughly clean any KBr residues away from both the die assembly and press parts (if there has been some accidental sample spillage in these areas - screw threading of lead screw and around the lower pressing piston area etc), to keep these items in correct working order and to minimise the risk from potential corrosion effects.*

If the 7mm diameter KBr sample pellet **is not to be saved for any further use**, the entire KBr pellet and die ring holder (6) assembly can be rinsed with cold or warm water to gradually dissolve away the KBr sample held within. When the KBr sample has been washed away from inside the die ring holder (6) part, the ring holder can be further washed and rinsed with methanol and then thoroughly dried with tissues. Specac would also then recommend that this part is stored in a dry environment or placed on a heated surface (circa 30°C to 35°C) prior to use for the next time. After initial pressing of the 7mm KBr pellet into the die ring holder (6) (from sample preparation stage), the top anvil (8) and bottom anvil (9) should also be rinsed with water, then methanol, dried with tissues and stored on a heated top plate surface ready for next use.

If the 7mm diameter sample pellet **is to be saved after spectral analysis**, it can be removed intact following the procedure for the pellet removal as found from the instructions provided for use of the 2T Mini-Pellet Press in the Basic Solid Pack variant offerings. However, when the 7mm diameter KBr pellet has been removed intact, the die ring holder (6) and top (8) and bottom (9) anvil parts must be cleaned thoroughly following the water then methanol washing regime and dried with tissues prior to dry storage or placed on a heated surface for next use.

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