take about 10 mg of sample

Depending on the sample it must be cut or just a few partials can be taken from the sample.
• For films/sheets: cut into small strips/pieces (~1–2 mm).
• For molded parts: shave or grind a small amount (scalpel, micro-drill, cryo-mill if needed for tough polymers).
• Aim for a homogeneous sample - pyrolysis analyses are sensitive to heterogeneity.
• Typical mass: (0.05–10 mg) If unsure, start at the lower end and high split flow.

put sample in quartz micro vial

Put the sample into the pyrolysis cup / micro vial: P/No: 2406-1050, DMI Quartz Sample Insert. Wear powder-free gloves and avoid contamination.

check sample weight on balance

To achieve more quantitative results, it can be helpful to weigh the sample before pyrolysis. However, this step can often be omitted if only qualitative information is required.

place quartz micro vial in quartz liner

Put the micro vial into the OPTIC liner: P/No: 2414-1018, Quartz DMI Liner

place the liner in the cold OPTIC inlet

Insert the liner with the O-ring and close the inlet. The OPTIC method will flush the liner before the pyrolysis step to remove air and, if needed, to dry the sample.

For double-shot / TD + pyrolysis:
• Thermal desorption step (low temp): place sample so volatiles are released onto the column/trap. Typical TD range: ~80–350°C depending on analytes.
• Pyrolysis step (high temp): after TD, raise to pyrolysis temperature (e.g., 500–1000°C depending on polymer).

start the pyrolysis-GC analysis

Standards, blanks, and controls
• Run a blank cup (empty) to check background and contamination.
• Use a matrix/sample standard or known polymer (polystyrene, PMMA, PE, etc.) to check pyrolysis conditions and retention behavior.
• Spike with an internal standard if quantitative work is intended (choose a compound that will survive pyrolysis and be analytically distinct) or dissolve the polymer and make a liquid injection pyrolysis.