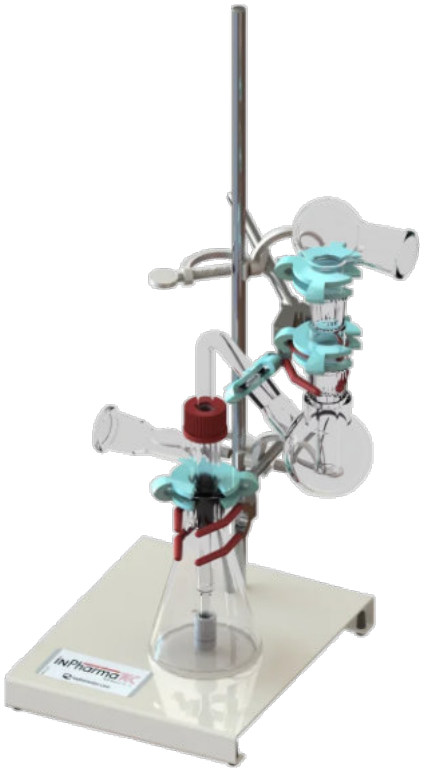
iNPharmaTEC
TCR Tecora® division

Made in Italy



GTI

GLASS TWIN IMPINGER

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GTI

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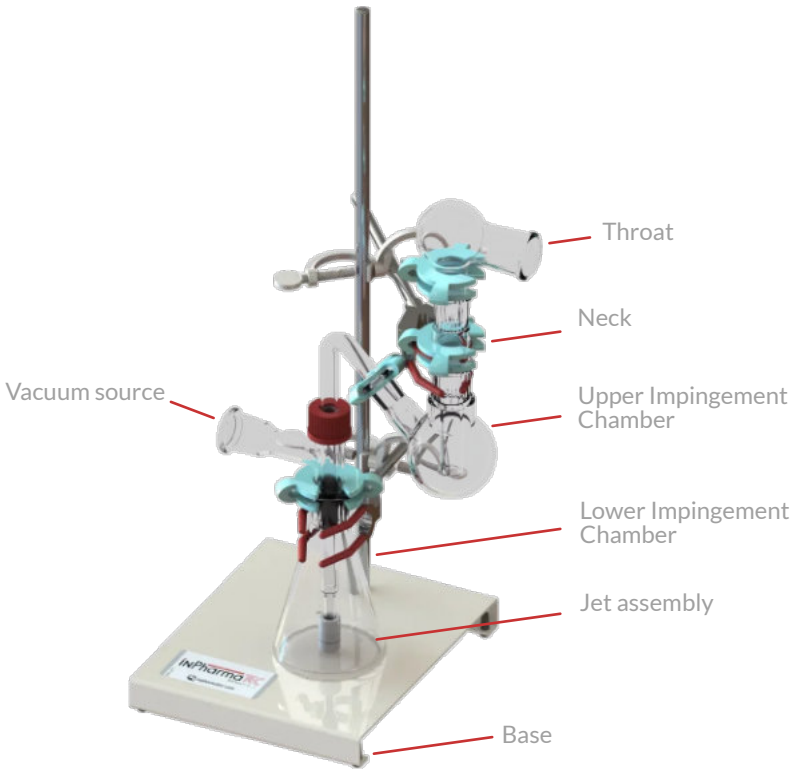


Applications

- Healthcare
- Inhaler Testing
- Pharmaceutical Production

The **Glass Twin Impinger (GTI)** is a laboratory device used in the testing of inhalation products, particularly for determining the aerodynamic particle size distribution of aerosols emitted from inhalers. It operates at a specific flow rate (usually 60 L/min) and uses a two-chamber system to separate particles based on their size.

How it works:

1. **Flow Rate and Cut-off Diameter**. The GTI functions at a flow rate of 60 L/min. It has a cut-off diameter of 6.4 µm, which means it separates particles larger and smaller than this size.

2. **Upper and Lower Impingement Chambers**. When the aerosol is introduced into the device, particles larger than 6.4 µm are collected in the upper impingement chamber. Particles smaller than 6.4 µm pass through to the lower impingement chamber.

3. **Purpose**. This separation allows researchers to quantify the respirable (small enough to reach the lungs) and non-respirable (too large to reach the lungs) fractions. This information is crucial for evaluating the efficiency and effectiveness of inhalation therapies, ensuring that the medication is delivered properly to the target site within the respiratory system.

Components:

The Glass Twin Impinger (GTI) consists of six primary components:

1. Base. Provides stability and support for the entire instrument during operation.

2. Jet Assembly. Directs the aerosol into the device.

3. Throat. Connects the jet assembly to the rest of the apparatus, guiding the aerosol flow.

4. Neck. Joins the throat to the impingement chambers.

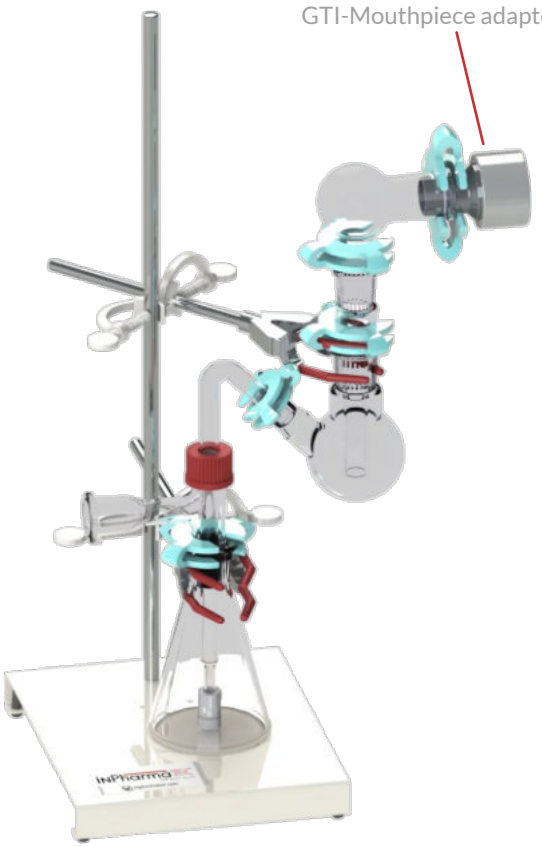
5. Upper Impingement Chamber. Collects larger particles (those greater than 6.4 µm).

6. Lower Impingement Chamber. Collects smaller particles (those less than 6.4 µm).

Together, these components ensure the accurate separation and collection of particles based on size, allowing for precise measurement and analysis of aerosol characteristics in inhalation product testing.

Main Characteristics and Materials

Weight (kg)	2.5
Dimensions (mm)	315 x 185 x 510
Stages	2
Calibrated flow rate	60 L/min
Glass material	Pyrex glass
Base material	Stainless Steel (AISI)
Jet assembly material	Delrin®



Accessories

Mouthpiece adapter

The mouthpiece adapter for the Glass Twin Impinger (GTI) is a component designed to securely connect an inhaler to the GTI. This ensures that the aerosol generated by the inhaler is accurately directed into the GTI for testing.

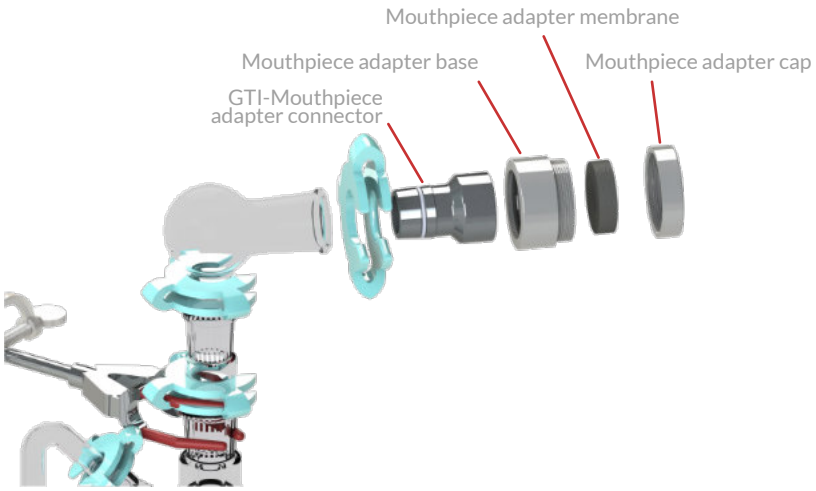
The adapter typically features:

1. Secure Fit. Ensures a tight, leak-proof connection between the inhaler and the GTI.

2. Standardization. Adapts to various types of inhalers to allow for consistent and repeatable testing conditions.

3. Material. Made from durable, inert materials that do not react with the aerosol or affect its properties.

The mouthpiece adapter is essential for maintaining the integrity of the aerosol as it transitions from the inhaler into the GTI, enabling accurate particle size distribution analysis.



Component	Material
GTI-Mouthpiece adapter connector	Delrin®
Mouthpiece adapter cap and base	Delrin®
Mouthpiece adapter membrane	Silicone
Gaskets/Seals	Silicone

Product Codes

Product	Code
GTI (Glass Twin Impinger)	AC99-122-0930SP
GTI (Mouthpiece adapter)	AC99-122-0931SP

The GTI is an essential tool in pharmaceutical research and development, providing critical data to ensure the safety and efficacy of inhaled medications.

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