Achieving Purity in Organic & Organometallic Chemistry

The pharmaceutical and specialty chemical industries need **perfectly pure compounds** for use in devices and medicines. Isolating pure chemicals for both industrial and medicinal materials significantly reduces the risk associated with incorporating impurities, even in trace amounts, into a device or a pharmaceutical product.

Adesis currently uses sublimation as a purification technique to achieve exceptional purity for chemical compounds with varying molecular weights and compositions. (See table.) Adesis has **seven in-house state-of-the-art sublimators** (1 Carbolite, 4 Themcraft, and 2 PVD), each with varying internal diameters (3, 4, 6, and 8 inches) and varying numbers of thermal zones (1, 3, and 7 zones). Our sublimators **safely enable the automated purification of any scale required** with precision control over the internal conditions.

Sublimation is a **scalable, low-cost purification technique** that produces no waste, so it supports green chemistry alternatives to traditional purification methods. The **low cost, scalability, and universality of compounds** that can be purified by sublimation and the **high level of purity** attained are invaluable to scientists across all disciplines.

General Compound Description	MW Range (amu)	Avg. Input Purity (%)	Avg. Output Purity (%)	Avg. Recovery (%)
Fused Heterocycles w/aliphatic aromatic substituents	200 - 500	97.1	99.4	81.6
More complex fused heterocycles	501 - 700	99.4	99.9	83.8
Complex, air stable organometallics & large mass fused heterocycles	701 - 900	97.7	99.4	89.5

Automated PVD 4-inch sublimator with 7-zone heating system capable of attaining 10-7 torr.

WHAT OUR CLIENTS SAY

We were considering other companies – and it turned out the usual suspects do not have the capability we needed. Adesis did. And they are fast and thorough.

ADESIS
A Universal Display Company

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Trust Us With Your Chemistry.

Contact our team to explore how we can delivery high purity to your chemistry project.