Vapor Silanization Rig

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Tool Type: Surface treatment
Location: Microfluidics Lab
Description: Vacuum deposition chamber
Manufacturer: Fisher Scientific

Last Updated: 4/4/23 Haley

About

The vapor silanization rig is located in the first fume hood you see to your left when you walk in the door of the microfluidics lab, Elings 3430.

Safety Concerns

Trimethylchlorosilane is flammable, toxic, and reacts with water vapor. It can make you sick if inhaled and ignite if it reacts with air or water vapor. It may only be used in the vapor silination rig inside of a fume hood. Do not let the pressure inside the chamber exceed 15 in Hg. The silane valve must always be opened in a nitrogen atmosphere. Protective eyewear, a lab coat, and gloves must be worn. Make sure the fume hood is closed when you are not working inside of it. Do not handle the silane without consulting the MSDS.

Training Documentation

Vapor Silanization Rig Safe Operating Procedures

Trimethylchlorosilane

Synonyms:

- TMCS
- Trimethylchlorosilane
- Trimethylsilyl chloride

Formula: C3H9ClSi

Molecular weight: 108.64 g/mol

CAS-No.: 75-77-4

EC-No.: 200-900-5

This protocol is intended for gas-phase monolayer deposition of a silane to serve as a counter-adhesion agent for glass or silicon substrates. The chemical trimethylchlorosilane will be referred to as silane for the purposes of this protocol. It can be deposited onto silicon and glass substrates and etch metal oxides (e.g. alumina).

Reference Documentation

tmcs_msds.pdf

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