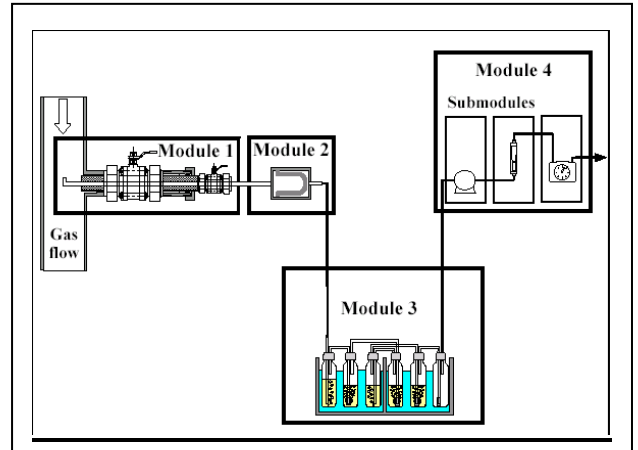


Sampling of TAR and Particles in flowing Gases

Measurement of Tar and Particles in Product Gases according to CEN Draft (CEN/BT/TF 143)

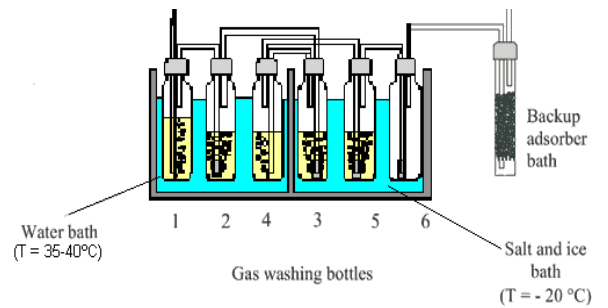
Method: Isokinetic sampling according to EN 13284-1, Out-Stack-Filtration (thimble filter according to VDI 2066, for glass faser thimbles (inner diameter \varnothing 26,8 x 68 mm), or quartz thimbles (inner diameter \varnothing 21,5 x 68 mm).

Sampling modul (TAR collection) in insulated box for cooling: In one separation box for ice-water cooling are two impinger bottles and one bottle with glass frits (250 ml), follows from three impinger bottles with glass frits (250 ml) separated in a box with cooling coil to cool down the water bath by a cooler. Fixed at the box is a back up VOC sampling trap. Space for XAD in VOC-trap: \varnothing 60 x ~ 90 mm with glass frit and GL-60-glass-thread.



Cooling and Sampling device with bubbler and VOC

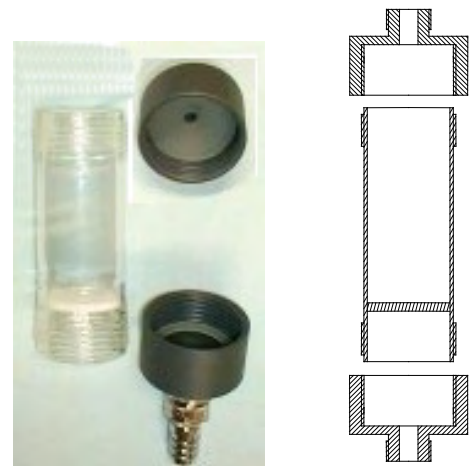
Sampling Train according to CEN Standard



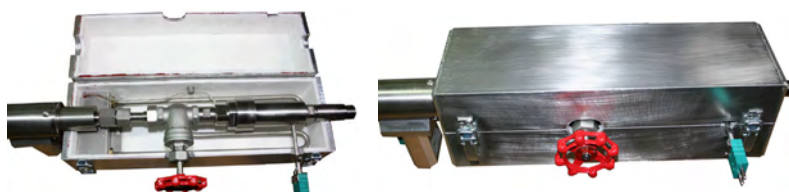
Tar collecting device



Suction tube with valve, filter with thermocouple and cooling coil



VOC-Adsorption Trap



Suction tube with filter heater