# SAFE COLLECTION OF BUFFER SOLUTIONS

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S.C.A.T. Europe SafetyWasteCap with Exhaust Filter V3.0 - Three Layers/Types of Active Carbon.

In order to correctly set or fix the pH value of an eluent (it should lie between 2 and 8), alkaline (base) and/or acidic additives, i.e. „buffer" solutions, are added to it. After the eluent has passed through the HPLC unit, it should, in the interests of safety, be collected in a suitable collecting container. Containers/canisters of a volume greater than 5 litres should, in addition, be constructed of electrically conducting material, in order to avoid any potential danger of ignition and possible resultant explosion (see the Safety Directive, TRGS 727 / 4.55). So that working personnel are protected from harmful solvent vapours, collecting containers are equipped with filters containing active carbon. The status quo: traditionally-used active carbon (used for many years now), which however is not ideal for filtering out acids and alkalis, as it often only does so insufficiently. Its adsorptional efficiency („CTC value") is comparitively low, as is its active surface area (600 – 1,200 $m^2/g$). The market leader, S.C.A.T. Europe, has now developed and introduced something extremely innovative: a product where the active surface area has been increased by no less than 25%, i.e. from 1,200 $m^2/g$ to 1,500 $m^2/g$. As per the ASTM D3467 Norm, the CTC adsorption value achieved by the new active carbon (meanwhile Generation 3.0) is now 90% (hitherto 70%). Especially in order to bind and remove alkaline and acidic gases, there are now two further layers of active carbon in the filters: the first contains a reactive impregnation which converts alkaline gases, by means of „chemisorption", and then binds them as „fully reacted" components. The second layer also consists of a highly active carbon, this one having been optimized for binding acidic gaseous components. With these 3 layers, the Generation 3.0 exhaust filters are able to remove more gaseous components produced during HPLC work than any others available on the market. The main advantage for the user is that only a single filter type need be employed, for all applications – even when methods or solvent compositions used are altered. Three sizes are available (with lifetimes of 3, 6 and 12 months). These continue to provide for tried and trusted solutions: smaller sizes allow for more flexibility when levels of waste being produced by HPLC units are frequently changing. If, however, larger quantities are regularly being produced, correspondingly larger filters enable annual savings of up to 35%.

The laboratory operator thereby achieves not only the highest possible standard of working safety and environmental protection, but also benefits from predictably high levels of efficiency, and by enjoying the associated cost savings involved – work in the laboratory is thus made „doubly" safe.

Our core active carbon has been tested, using official ASTM / DIN / ISO test methods.
**Click here for more informations - Brochure Exhaust Filter V3.0**

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