

Anasorb 747

Anasorb® — a Trademark of Quality

In 1973, SKC made the first commercial sorbent tube to be sold to NIOSH. Since then, sorbent tube technology has continued to advance and SKC is proud to have played a major role in this effort. To more easily identify SKC proprietary sorbents in air sampling methods and other technical areas, the name Anasorb became a registered trademark in 1990. While the first sorbents with the Anasorb trademark were beaded materials, the Anasorb name is used for SKC proprietary sorbents of all types.

Anasorb 747

Anasorb 747 is a synthetic carbon with low ash content. It was examined as a candidate material for sampling polar organic compounds that cannot be sampled using coconut charcoal, such as ketones.¹ Coconut charcoal has a high surface area and adsorbs water vapor. This causes the reaction of ketones (and other polar compounds) to take place faster, which produces reaction products and reduces desorption efficiency. Anasorb 747 is hydrophobic (picks up less water vapor) and has a lower surface area; therefore, there is less reactivity and less breakdown of the original adsorbed ketones providing a higher desorption efficiency for most compounds.

In dynamic uptake studies, Anasorb 747 picked up less water vapor than coconut charcoal. Acetone and 2-butanone adsorbed from humid atmospheres showed only very slow breakdown at ambient temperatures. Breakdown was further slowed by refrigeration. Desorption efficiencies using carbon disulfide alone were high (> 90%), reproducible, and showed little difference (4 to 5%) between wet and dry samples. When a polar co-solvent (e.g., butanol) was added to the desorption solvent, recoveries from the wet sorbent increased to nearly 100%.

Anasorb 747 has properties similar to the best petroleum charcoals and can be used for a very wide range of polar and non-polar organic vapors. When combined with a solvent appropriate to mixtures such as dimethylformamide, successful sampling is possible for a majority of organic vapors.

For a list of Anasorb 747 sorbent tubes for particular chemical hazards, refer to the chart on reverse side.



Other sorbents with the Anasorb name:

Anasorb 727 - a microporous polymer for sampling less volatile reactive and polar compounds

Anasorb GCB1 - Graphitized Carbon Black for sampling aliphatic and aromatic hydrocarbons

Anasorb GCB2 - Graphitized Carbon Black for sampling less volatile compounds

Anasorb CSC - the new lot 2000 of Coconut-shell Charcoal for sampling organic compounds



Anasorb 747

Sorbent Tube Applications for Anasorb 747

Chemical Sampled	Sampling Method	Anasorb 747 Amount (mg)	Size (mm) OD x L	Cat. No.
Ammonia	OSHA ID 188	250/500 coated with Sulfuric acid	8 x 110	226-29
2-Butanone (MEK)	NIOSH 2500	140/70	6 x 70	226-81A
n-Butyl acrylate	Non-agency Method 54 ²	140/70	6 x 70	226-81A
2-Chloroethanol (ethylene chlorohydrin)	NIOSH 2513	140/70	6 x 70	226-81A
Desflurane	OSHA 106	140/70	6 x 70	226-81A
1,1-Dichloro-1-nitroethane	NIOSH 1601; OSHA 07	140/70	6 x 70	226-81A
1,2-Dichloropropane (propylene dichloride)	NIOSH 1013	140/70	6 x 70	226-81A
Dipropylene glycol methyl ether (glycol ethers)	NIOSH 2554	140/70	6 x 70	226-81A
Dipropylene glycol monomethyl ether (glycol ethers)	NIOSH 2554	140/70	6 x 70	226-81A
Enflurane	OSHA 103	140/70	6 x 70	
Ethyl acrylate	Non-agency Method 54 ²	140/70	6 x 70	226-81A
Ethyl alcohol (Ethanol)	OSHA 100	400 (front tube) 200 (back tube)	8 x 110	226-82
Ethylene chlorohydrin	OSHA 07	140/70	6 x 70	226-81A
Ethylene oxide	OSHA 1010; ASTM D5578; NIOSH 1614	100/50 coated with Hydrobromic acid	6 x 70	226-178
Furfural	OSHA 72	140/70	6 x 70	226-81A
Halothane	OSHA 103	140/70	6 x 70	226-81A
Iodine	OSHA ID 212	50/100 coated with Potassium hydroxide	6 x 70	226-80
Iodine (particulates present)	OSHA ID 212	50/100 coated with Potassium hydroxide	16 to 8 x 85	226-142
Isoflurane	OSHA 103	140/70	6 x 70	226-81A
Isophorone	NIOSH 2508; OSHA 07	140/70	6 x 70	226-81A
Isopropyl alcohol	OSHA 109	400 (front tube) 200 (back tube)	8 x 110	226-82
1-Methoxy-2-propanol (glycol ethers)	NIOSH 2554	140/70	6 x 70	226-81A
1-Methoxy-2-propyl acetate (glycol ethers)	NIOSH 2554	140/70	6 x 70	226-81A
Methyl acrylate	Non-agency Method 54 ²	140/70	6 x 70	226-81A
Methyl alcohol	OSHA 91	400 (front tube) 200 (back tube)	8 x 110	226-82
Methyl bromide	OSHA PV2040	200/400	8 x 110	226-83
Methyl ethyl ketone	NIOSH 2500	140/70	6 x 70	226-81A
Methyl formate	OSHA PV2041	200/400	8 x 110	226-83
Methyl methacrylate	Non-agency Method 54 ²	140/70	6 x 70	226-81A
Propargyl alcohol	OSHA 97	100/50 coated with Hydrobromic acid	6 x 70	226-178
n-Propyl nitrate	OSHA 07	140/70	6 x 70	226-81A
Propylene oxide	OSHA 88	140/70	6 x 70	226-81A
Styrene	Non-agency Method 54 ²	140/70	6 x 70	226-81A
Sulfur dioxide	OSHA ID 200	50/100 coated with Potassium hydroxide	6 x 70	226-80
1,1,2,2-Tetrachloroethane	NIOSH 1019; OSHA 07	140/70	6 x 70	226-81A
Toluene	OSHA 111	140/70	6 x 70	226-81A
Anasorb 747 in bulk/100 gm				P226200

For Passive Samplers with Anasorb 747, see www.skinc.com/PassiveGuide/passivecatno.asp.

References

- Harper, M., "Anasorb 747 - A Universal Sorbent for Air Sampling?" presented at the Air & Waste Management U.S. EPA International Symposium on Measurement of Toxic & Related Air Pollutants, Research Triangle Park, North Carolina, April 29 - 30, 1997
- Saunders, H., Methyl Acrylate, Acrylonitrile, Ethyl Acrylate, n-Butyl Acrylate, Methyl Methacrylate, n-Butyl Methacrylate, and Styrene Using Anasorb 747 Sorbent Tubes, Rohm & Haas Corporate Hygiene Laboratory, Method IH9402, SKC Non-agency Method 54

SKC Limited Warranty and Return Policy

SKC products are subject to the SKC Limited Warranty and Return Policy, which provides SKC's sole liability and the buyer's exclusive remedy. To view the complete SKC Limited Warranty and Return Policy, go to <http://www.skinc.com/warranty.asp>.

