

SAAF™ TECH TOOLS: DECISION SCIENCE SOLUTIONS FOR GAS PHASE FILTRATION APPLICATIONS

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Selecting an appropriate gas phase filtration solution to remedy a customer issue can be challenging, particularly when defining relevant information. What chemicals are present in the air? What is the right media to adsorb these chemicals? What is the right type of equipment needed? How long will the media last before it needs to be changed? This paper will show how SAAF™ Tech Tools can help the user to intuitively select an appropriate solution for a specific application and ensure that the customer's concerns regarding harmful gases in occupied spaces will be handled safely.

Designed by experts in gas phase filtration, this web-based application guides the end user through the process of entering critical application parameters, such as the contaminant gases present, system air flow, and steady/peak operating conditions, to generate the appropriate solution. Predefined project templates are loaded into this tool with typical contaminant gas concentrations in ppb (parts per billion) for commonly encountered environments, such as hospitals, petroleum refineries, pulp and paper mills, landfills, and major metropolitan areas. This allows the use of typical application-specific gas phase contamination data when no other information is available. If specific information is known, a custom solution can be created from a blank template, and users will be guided through the process with an easy-to-use interface. A wide variety of commonly encountered gases, searchable by common name, alternative names, and Chemical Abstracts Service (CAS) number, are programmed into the decision science-based algorithms. The output of the program displays the appropriate chemical adsorption media to use with projected media consumption rates in ft³/year based on media test results. When paired with capacity volumes of containment equipment, a complete technical solution, along with filter life estimates, is delivered. Particulate air filtration can be added to the proposal to determine pressure drop/energy usage information that can go into total cost of ownership energy calculations.

Combined with AAF Flanders' expertise in airborne particulate filtration and the TCO Diagnostic® tool, SAAF™ Tech Tools offers the ability to easily obtain a clean air filtration solution to protect people, processes, equipment, and the environment.