



Title	Atmosphere Air Purifier
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Reference	Technology Review Report, 011/08. http://medicaldev.moh.gov.my/uploads/air_purifier.pdf

Aim

To determine the safety and effectiveness of a portable device that utilizes high efficiency particulate arrestor (HEPA) filters to purify air.

All relevant literature was systematically reviewed, and the evidence was graded according to the modified Oxford scale.

Conclusions and results

Sufficient scientific evidence was retrievable to support the claim that HEPA filters have a minimum efficiency exceeding 90% for particles of 0.3 microns in diameter. Evidence showed that air purifiers or air cleaners with HEPA filters could remove air pollutants and particulates such as molds, bacteria, smoke contaminant, and cat- and dog-associated allergens. Scientific evidence was insufficient as regards the efficacy of HEPA filters in capturing viruses, gaseous pollutants, or radon and its progeny.

Recommendations

The following is recommended:

- Portable air purifiers may be considered for use in a recommended room size for residential areas, taking into account the capacity of the equipment.
- The ATMOSPHERE air purifier is not recommended for Ministry of Health facilities.

Methods

The search for published reports included the following electronic databases: PubMed, Ovid search engine, full text journal which covers MEDLINE, CINAHL, HTA Databases, FDA website, and Google search engine. Additional articles were identified by reviewing the bibliographies of retrieved articles. No limitations were imposed on the search. The search strategy used the following terms, alone or in combination: HEPA filter, high efficiency particulate air filter, portable air filter, air cleaner, effectiveness, safety, smoke, dust, mites, virus, microorganisms, fungus, bacteria, micro particles, and particulates.