

# IQAir DentalPro and DentalPro Flex-Vac Mercury Air Cleaner

Received.....5.5.03 Scientific Review .....4.3.06 IAOMT Board Review.....3.15.07 Re evaluation	<b>Environmental</b>	<b>Approval.....</b> <b>3.15.07</b> Provisional Approval No Opinion No Approval
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**Explanation of IAOMT position:** This type of equipment is an important adjunct for those professionals concerned with optimal protection for the patient, Dr. and staff while removing mercury amalgam fillings.

<b>Name of SR:</b> IQAir DentalPro and DentalPro Flex-Vac Mercury Air Cleaner
<b>This SOC/SR is related to?</b> Medicine & Dentistry
<b>This SR is Equipment</b>
<b>Do you have a vested financial interest in any part of this SR?</b> yes
<b>Purpose of the SR:</b> A portable air cleaner to remove, among others, mercury vapor, odors (VOC's), formaldehydes, latex and perfume from office air and reduce particulate matter in the air over 99%
<b>SR History:</b> IQAir have been making medical quality air cleaners, the HealthPro Plus units and highly efficient commercial and industrial Gas and Odor removal units for many years. In 2002 the DentalPro and Dental HgFlexVac were introduced.
<b>Briefly describe the SR:</b> Both types of units are of modular design and remove mercury vapor and particulates from air with HEPA-type filters and Gas Phase Filter Cartridges via a high-performance centrifugal fan. The FlexVac hose can be positioned at the patient's mouth while the amalgam mercury filling is removed. Mercury vapor readings indicate almost no mercury vapor (0.0 mmg/cubic cm) over one foot from operative site while unit was operating and filling was removed. Total particulate matter over 0.3 microns is reduced over 99%.
<b>Specifically, by outline if appropriate, describe the SR:</b>  <b>BOTH UNITS:</b> Dental Pro & Dental Hg Flexvac <ul style="list-style-type: none"> <li>A. Centrifugal fan w/capacity of 700 cuft/min, with actual point-of-use air delivery of 235 cfm at speed 6.</li> <li>B. Air intake from bottom enters High-Efficiency HEPA-type pre-filter (holds back 90% of particulates &lt;0.3 microns)</li> <li>C. Air forced through four cartridges and out through post-filter sleeves (electrostatically charged removes 99% &lt;0.3 microns)</li> <li>D. Closed system, i.e. no air can get around filters/cartridges once brought in through bottom of unit (no leakage)</li> <li>E. Removes microbiologicals as fine aerosols and gaseous vapor in dental office, e.g. blood, saliva, filling particles and bacteria/viruses within particles.</li> <li>F. Digital Control Panel allows setting unit to alert user when each of the three filters reach saturation based upon fan speeds and user setting of particle, dust and gas sizes to be filtered.</li> <li>G. A remote control is supplied.</li> </ul>

<p><b>DENTAL PRO</b></p> <p>A. Cartridges contain three pollutant specific gas phase media: sulfur-impregnated activated charcoal, plain activated charcoal and potassium permanganate</p> <p>B. Mercury is removed by two of the four canisters at each pass (near 50% reduction of mercury vapor each pass)</p> <p><b>DENTAL Hg FLEXVAC</b></p> <p>A. Cartridges all contain sulfur-impregnated activated charcoal for close to 100% mercury removal at each pass.</p> <p>B. FlexVac hose at mouth area captures vapor at the source of drilling/aerosol at chairside.</p>
<p><b>Manufacturer:</b> IQAir, Santa Fe Springs, CA at <a href="http://www.IQAir.com">www.IQAir.com</a></p>
<p><b>Scientific Literature:</b></p> <p>A. Several US and European Patent for fan and housing design</p> <p>B. Research Report Institute of Hygiene, Univ of Heidelberg, Germany “Indoor Air 99” Presented at the 8<sup>th</sup> Int’l Conference on Indoor Air Quality and Climate, Edinburgh, Scotland, Aug 1999</p> <p>C. Erdinger L, Durr, M, Sonntag,H-G. 1996, Indoor Air Purification by a modular room air cleaner. Forum Stadte Hyg Vol 47, pp231-34.</p> <p>D. Anonymous, 1991. Air purifiers can help in the battle against mercury vapor. Dentistry Today Vol 10 (8) pp24-5</p> <p>E. Pohl, L, Bergman, M. 1995 The dentist’s exposure to elemental mercury vapor during clinical work with amalgam. Acta Odontologica Scandinavica. Vol 53 (1), pp44-48.</p> <p>F. Langworth S, Sallsten G, Barregard, L, et al. 1997. Exposure to mercury vapor and impact on health in the dental profession in Sweden. J Dent Res, Vol 76 (7), pp1397-1404.</p> <p>G. Erdinger, L, Sonntag, H-G, Hammes, K-H. 1990 Performance of a simple fiber-filter system for indoor air purification by convection. Proceedings of the 5<sup>th</sup> Int’l Cong on Indoor Air Quality and Climate – Indoor Air ’90. Vol 3, pp 163-168</p>
<p><b>Legal Aspects of this SOC/SR:</b> N/A</p>

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The IAOMT and Mankind Thanks You!