

Is Your Office Killing You?

Beat Sick Building Syndrome and protect your staff with Oxyvital: the world's first air purifier that meets and exceeds WHO standards

(Hong Kong, 2012) - It's damp. It's sunny one minute and raining the next. You're miserable. And it's not just a case of seasonal sulking, it's a syndrome. **Sick Building Syndrome** to be precise. Air pollution levels in Hong Kong reached 'life-threatening' levels in 2011.¹ But it is not just pollution on the streets that the city's 7 million residents have to worry about – but also the indoor air quality (IAQ). Indoor air pollution is among the top five environmental health risks and is responsible for 2.7% of the global burden of disease, according to Global Health Risks: Mortality and burden of disease.² And in smoggy Hong Kong, IAQ is a major cause for concern.

In January 2012, a two-day air-purification exercise failed to clear toxic substances from the Hong Kong Legislative Council building in Admiralty, forcing some legislators to move out and send staff home because of the poor air quality. Readings taken on two consecutive mornings showed the level of total volatile organic compounds (TVOC) – substances normally found in construction material such as wallpaper glue and oil paint – on four of the 13 floors of the Legco complex was above the safety level of 261 parts per billion (ppb), with the figure on the fifth floor reaching 320ppb.³

Sick Building Syndrome (SBS) is a medical condition formally recognised by the World Health Organisation (WHO). SBS is used to describe a situation where people experience symptoms of ill health that are linked to spending time in a building with an adverse indoor environment and poor air quality. The WHO estimates that up to 30 per cent of new or remodeled buildings globally cause some form of SBS and that, in the worst cases, up to 85 per cent of the occupants suffer symptoms.⁴

In Hong Kong, the figure is thought to be much higher. The University of Hong Kong recently released updated research showing 3,200 Hong Kongers died each year from illnesses related to bad air, up from the previous estimate of 1,000.⁵ In the short term, TVOC leads to sore eyes, unexplained headaches,

¹ Civic Exchange (January 2012) 'Principles and Measurements to Improve Air Quality: Policy Recommendations for a New Administration' by Mike Kilburn and Christine Loh: dl.dropbox.com/u/2439304/civixexchange/120112DT_ReportCard_en.pdf

² Global health risks: mortality and burden of disease (2009) World Health Organisation: http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cts=1330487759294&ved=0CCUQFjAA&url=http%3A%2F%2Fwww.who.int%2Fhealthinfo%2Fglobal_burden_disease%2FGlobalHealthRisks_report_full.pdf&ei=jKFNT5vHL4SviQfv6K23CQ&usg=AFQjCNEIStwuYG7AfDnBNPF0fBM7eItDrw&sig2=9fVch5YWCPpR4C37GhLKZ_Q

³ Purification fails to clear the air at Legco (18 January 2012), South China Morning Post, Byline Tanna Chong

⁴ Indoor Health Pollution: An introduction for Health Professionals, United States Environmental Protection Agency: <http://www.epa.gov/iaq/pubs/hpguide.html>

⁵ Civic Exchange (January 2012) 'Principles and Measurements to Improve Air Quality: Policy Recommendations for a New Administration' by Mike Kilburn and Christine Loh: dl.dropbox.com/u/2439304/civixexchange/120112DT_ReportCard_en.pdf

fatigue, skin rashes and respiratory problems and in the long term, ailments can include lung cancer, chronic bronchitis and pneumonia.

But SBS, a condition that causes misery for tens of thousands of Hong Kong office workers, can easily be prevented. Recognising the negative impact of poor IAQ many businesses have been quick to install an Oxyvital air purification system in their premises and the results have been remarkable.

European Trading house Schutte & Panzer noticed a marked improvement in the air quality leading to higher performance and less sickness in the work place. Managing Director Mr. Panzer said, *"Our staff absence figures due to illness have been reduced by approximately 70%. Additionally, the staff have commented on feeling less tired and much more energetic"*.

Hong Kong's JW Marriott Hotel also undertook the decision to install Oxyvital machines to improve air quality for guests and staff after IAQ tests confirmed the presence of high levels of many known contaminants. JW Marriott Hong Kong's Director of Engineering Wilson Chan said: *"We believe that Oxyvital will give us a strong competitive edge by enhancing the wellbeing and comfort level of our guests and staff"*.

CHI Residences, is Hong Kong's first Serviced Apartment brand that has chosen to provide its staff and guests with superior indoor air quality, installing Oxyvital units in its four existing buildings around Hong Kong. *"You can't put a price on health"*, says CHI Residences CEO, Pilar Morais. *"We want our staff and guests to enjoy the indoor environment and ensure they don't suffer any negative effects of indoor air pollution,"* she added.

Is Hong Kong Losing its Competitive Edge?

Hong Kong's air pollution is increasingly cited as a competitive disadvantage for the city, deterring expats from moving to or staying here. Last year, the conductor of the Hong Kong Philharmonic Orchestra said he would leave after his contract was up, because he wanted to relocate his family, particularly his asthmatic son.⁶

A recent ranking of cities by the World Health Organisation (WHO) in respect of PM2.5, measurements of airborne particles of 2.5 micrometres in diameter or less, placed Hong Kong -- which competes with Singapore as Asia's banking powerhouse -- at 559th out of 566 cities. *"Air quality is not only damaging residents' health, it is also eroding the city's competitiveness as a regional centre for business and finance,"* said the Environmental Programme Manager of Hong Kong-based public policy think tank Civic Exchange, Mike Kilburn.

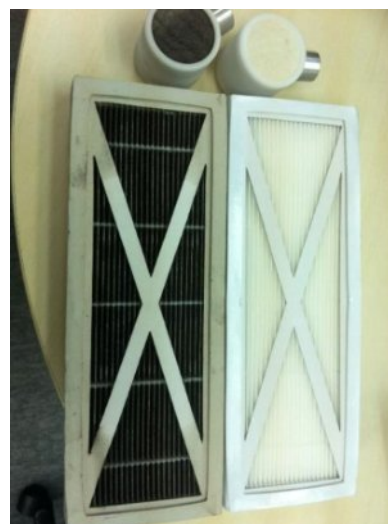
Aside from air pollution, airborne viruses such as SARS and Avian Flu are a concern for many travelers. In 2010, Oxyvital underwent independent testing by the Beijing University of Technology (BJUT) to confirm its effectiveness

⁶ The Clean Air is Included in the Rent, Wall Street Journal Asia, Byline: Ellen Sheng: <http://blogs.wsj.com/scene/2011/10/20/the-clean-air-is-included-in-the-rent>

against the spread of airborne viruses. The report released in November 2010 confirmed that Oxyvital air purifiers have 100% efficiency in the removal of airborne viruses including H5N1, H1N1 and SARS after 120 minutes in operation. The results state that Oxyvital air purifiers have a ONE-PASS or FIRST-PASS viral disinfection rate of 99.93%. That means, for every cycle of air that passes through the Oxyvital machines, 99.93% of the airborne viruses are reduced per cycle. Each cycle takes approximately 12 seconds.⁷

How can Oxyvital help you?

When air passes through an Oxyvital air purifier, it goes through a multi-stage prefiltration process including a preliminary course pre-filter, a fine pre-filter and a HEPA pre-filter. These pre-filters remove dust and larger particles before the air is forced through a medical grade compressor and then into a patented ZeoSieve™ system – which is up to 2,000 times smaller than what most other air purifiers process. The picture, for example, shows a blackened filter (left) that was removed from an Oxyvital machine, after just three month's of use, located inside an office in an “A-grade” listed commercial building in Central. The filter on the right shows a regular Oxyvital filter.



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About Oxyvital

www.oxyvital.com

Oxyvital is currently patented in U.S., Europe, China and select Asian countries. It obtained accreditation and certification from the Hong Kong University of Science and Technology (HKUST). It is also a German TUV certified medical device, and is recognised internationally for its stringent quality. The Oxyvital technology is currently widely used in Europe, America, China, Hong Kong and South East Asia. It is installed in government buildings, commercial and residential spaces, schools, fitness centers, medical institutions and more.

⁷ Beijing University of Technology Study:

<http://www.oxyvital.com/test/2010oct-ChinaVirusTest/BJUT-Report-Combined-ChiEng.pdf>