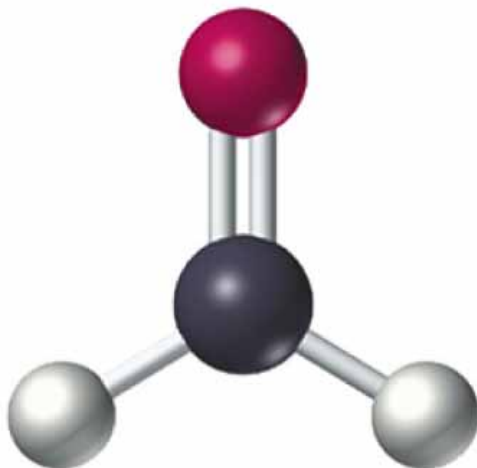


## Application – Laboratories

Laboratories always come with special needs. This does not only refer to the equipment such as work tables, water-, gas- and electrical connections, but also to the ventilation systems. Despite most of the jobs being performed in extractor hood compartments, there are also processes done on open work tables, causing chemicals to evaporate in certain concentrations and contaminate the indoor air. Measures have to be taken to ensure that these airborne chemicals do not exceed thresholds above which they pose a health hazard to the people working inside the laboratories. In addition the precise work in a laboratory often demands clean supply air to avoid contamination from outside sources.

These special needs regarding the air in laboratories were also met in an autopsy teaching and research laboratory in China. Given the nature of the work, extractor hoods are not suitable, yet quite a number of tasks include the use of formaldehyde. General extraction of the indoor air by exhaust air ducts could only curb the overall concentration of the formaldehyde, but did nothing to lower the concentration below that level inside the room. Therefore a solution of air cleaning to be effective inside the room was requested, which did not necessitate major changes in the scheduled ventilation duct system.



The ionisation technology as employed in the **bioclimatic** AEROECO product line **aerotron** offers a flexible system for duct-mountable ionisation units, easy to be implemented in already existing air ducts. The activated oxygen created by this ionisation units is then carried with the air flow inside the room, where it abates the formaldehyde. For this project **bioclimatic** GmbH through our local partner Convect Limited installed several aerotron units in the supply air ducts of the laboratory, equipped with IRE-tubes (silver coated) to meet the cross-section of the air ducts. In

addition, to enhance the ventilation system design, **bioclimatic** installed an aeromat 1200 unit to provide additional ionisation inside the room. This measure brought considerable relief to both teachers and students, who confirmed that without the ionisation equipment with regard to the formaldehyde present in the laboratory the circumstances would have been unbearable. This positive feedback led to further installations of ionisation equipment in other autopsy facilities not only in China but also worldwide.

