



## Technical bulletin

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A specialised supplier of high-technology safety cabinets, laminar flow cabinets, precision air samplers and cleanroom test equipment

### Class II biological safety cabinets used with cytotoxic drugs

#### Introduction

Class II biological safety cabinets (BSCs) are intended to provide protection for personnel, environment and products in work with micro-organisms classified in AS 2243.3 as Risk Groups 2 and 3; and which can be deactivated by a fumigation procedure such as that described in AS 2647. They are unsuitable for use with cytotoxic drugs and other toxic chemicals, as these materials cannot be deactivated by fumigation. Many cytotoxic drugs have mutagenic, teratogenic, or carcinogenic properties, where no effect threshold dose can be identified.

#### Cytotoxic drug safety cabinets

These cabinets protect operators, environment, products as well as service personnel. They are described in AS 2567 and have different filter systems from Class II BSCs.

#### Animal studies with cytotoxic drugs

An increasing number of Class II BSCs are used in animal studies and a significant number of these applications involve the use of cytotoxic drugs. Use of cytotoxic drugs in Class II BSCs exposes service personnel to permanently-contaminated surfaces. Notwithstanding that the volumes of drugs used in this work are relatively low compared to a hospital pharmacy; the potential exists for cabinet service personnel to be exposed to residue of drug compounds. This suggests the need to review criteria for selection of cabinets to protect *all* personnel – regardless of whether the application is in a research laboratory or a pharmacy.

#### Risk assessment prior to servicing BSCs

Personnel servicing Class II BSCs used in this way should have prior advice from the cabinet user of the materials used so that they are able to make a risk assessment before undertaking service work.

#### Australian standards

SAA Committee ME-060, that prepares Australian standards for BSCs, is currently revising AS 2252 and is considering means of promulgating an additional caution on this limitation of BSCs.

Gelaire Pty Ltd  
20 Tucks Road  
Seven Hills NSW 2147  
ABN: 46 111 828 561

T: (02) 8811 3706  
F: (02) 8811 3799  
W: [www.gelaire.com.au](http://www.gelaire.com.au)  
E: [info@gelaire.com.au](mailto:info@gelaire.com.au)