Health monitoring

Guide for pentachlorophenol (PCP)





Contents

[Introduction 3](#_Toc22731223)

[Pentachlorophenol (PCP) 4](#_Toc22731224)

[1. Health monitoring for PCP under the Work Health and Safety (WHS) Regulations 4](#_Toc22731225)

[2. Monitoring exposure to PCP 5](#_Toc22731226)

[Other health monitoring methods 6](#_Toc22731227)

[Workplace exposure standard 6](#_Toc22731228)

[Removal from work 6](#_Toc22731229)

[Return to work 7](#_Toc22731230)

[3. Final medical examination 7](#_Toc22731231)

[4. Route of occupational exposure 7](#_Toc22731232)

[5. Target organ/effect 7](#_Toc22731233)

[6. Acute effects 8](#_Toc22731234)

[7. Chronic effects 8](#_Toc22731235)

[8. Carcinogenicity 9](#_Toc22731236)

[9. GHS classification 9](#_Toc22731237)

[Source documents 9](#_Toc22731238)

[Health monitoring report – Pentachlorophenol (PCP) 13](#_Toc22731239)

[Section 1 – A copy of this section to be provided to the PCBU 13](#_Toc22731240)

[Section 2 – This section to be retained by the registered medical practitioner 16](#_Toc22731241)

Introduction

This guide is intended to be read by a registered medical practitioner with experience in health monitoring who is engaged by person conducting a business or undertaking (PCBU) to carry out or supervise health monitoring. It provides practical guidance to registered medical practitioners about requirements under the work health and safety (WHS) laws for health monitoring.

This guide applies to all workplaces covered by the WHS Regulations where health monitoring is required.

**How to use this guide**

This guide includes references to the legal requirements under the WHS Act and WHS Regulations. These are included for convenience only and should not be relied on in place of the full text of the WHS Act or WHS Regulations.

The words ‘must’, ‘requires’ or ‘mandatory’ indicate a legal requirement exists that must be complied with. The word ‘should’ is used in this guide to indicate a recommended course of action, while ‘may’ is used to indicate an optional course of action.

This guide provides information for those registered medical practitioners engaged by a PCBU to carry out or supervise health monitoring for workers. This guidance should be read in conjunction with the following:

* *Health monitoring guide for registered medical practitioners*
* *Health monitoring guides for hazardous chemicals*
* *Health monitoring guide for workers*
* *Health monitoring guide for persons conducting business or undertakings (PCBUs).*

**Health monitoring under the WHS Regulations**

In certain circumstances, the model WHS Regulations place duties on a PCBU to provide health monitoring to workers. These requirements arise if the worker is carrying out work with hazardous chemicals including lead and asbestos. In addition, the work being carried out must be the kind of work specified in the WHS Regulations. A PCBU has the duty to determine if health monitoring is required.

The WHS Regulations prescribe that health monitoring is carried out by or supervised by a registered medical practitioner with experience in health monitoring.

# Pentachlorophenol (PCP)

Pure pentachlorophenol (PCP; CAS 87-86-5) is a colourless or white, needle-like crystal. Commercial grade PCP (86 per cent purity) is a dark grey to brown solid with a phenolic, pungent smell.

Chloro-dibenzodioxins and dibenzofurans are known contaminants of PCP.

*Synonyms:* penchlorol, dowicide EC-7.

**Work activities that may represent a high risk exposure**

PCP was once used as a preservative against timber-destroying fungi, sapstain moulds and some timber-boring insects and termites. There are currently no approved agricultural or veterinary chemical products containing PCP in Australia. Recent information indicates little to no industrial use of PCP in Australia. However, it may still be used in chemical manufacturing and exposures may occur in saw mills, wood treatment facilities, construction sites or where lumber is used, recycled or installed.

Examples of work activities involving PCP that require special attention when assessing exposure include workers who:

* handle or process wood that has been preserved with PCP, and
* work near preserved wood processes.

PCP can be present in the air as vapour, aerosol or particulate. The workplace exposure standard can provide information about the level of airborne PCP available for absorption by workers.

PCP is readily absorbed through the skin and workers who come into contact with PCP contaminated dusts or PCP contaminated surfaces are at risk of exposure.

**Sources of non-occupational exposure**

Small amounts of PCP may be found in the general population. PCP is found in all environmental media as a result of its past widespread use and may be detected in the urine and plasma of most people. However, the background levels are gradually decreasing.

## Health monitoring for PCP under the Work Health and Safety (WHS) Regulations

Collection of demographic, medical and occupational history

Records of personal exposure

Physical examination with emphasis on the skin, noting any abnormal lesions or effects of irritancy

Urinary total PCP

Dipstick urinalysis for haematuria and proteinuria

Health monitoring before starting work in a PCP process

Health monitoring for PCP may be required before the worker starts work so that changes to the worker’s health can be detected.

Initial discussions about a health monitoring program should include:

* possible health effects from exposure to PCP
* how to recognise and report symptoms, and
* what is involved in the health monitoring program, for example the frequency of testing and the tests that may be needed.

In particular, workers should be aware of the occurrence and recognition of skin changes and irritancy, and the need to report them to the registered medical practitioner as soon as possible, even if they occur between regular health monitoring.

The following tests should be used to test the worker’s baseline health status and repeated every 180 days for comparison:

* spot urine test for total PCP, and
* dipstick urinalysis for haematuria and proteinuria.

During exposure to a PCP process

## Monitoring exposure to PCP

Where workers are exposed, suspected of being exposed or are concerned about exposure to PCP, the person conducting the business or undertaking (PCBU) has a duty to arrange a health monitoring appointment with a registered medical practitioner. For example, an appointment should be arranged following spills or loss of containment of PCP resulting in excessive exposure to workers or when workers develop symptoms of PCP exposure.

PCP is readily absorbed through intact skin, via the lungs and the gastrointestinal tract. Pulmonary retention has been estimated to be in the range 70 to 90 per cent. Dermal absorption following exposure to PCP vapour can be significant.

Only a relatively small amount of PCP is metabolised; 70 to 78 per cent of the absorbed dose is excreted intact. A small amount (10 to 20 per cent) is excreted as a glucuronide conjugate.

The following test may be used to test the worker’s exposure:

* urinary total PCP levels.

Where urinalysis is carried out, the following value may be considered when assessing exposure to PCP:

Biological exposure guide for PCP[[1]](#footnote-1)

*Urinary total PCP:*

0.25 mmol/mol creatinine

The above cited value should be considered a guidance value only.

It is recommended to conduct monitoring of urinary total PCP levels as it provides an indication of exposure, but should not be used to provide an indication of the extent of exposure. There is generally only a low level of urinary total PCP levels in individuals who have not been occupationally exposed.

There is considerable inter-individual variability in the ratio of free PCP to conjugated PCP in urine. Therefore, total PCP after hydrolysis of the glucuronide should be quantified.

Samples should be collected pre-shift towards the end of the working week. As PCP is highly protein bound in blood and undergoes extensive enterohepatic recirculation, the elimination half-life is very long (approximately 20 days).

Dipstick analysis for haematuria and proteinuria should be carried out every 180 days and compared to the baseline results.

### Other health monitoring methods

PCP levels in serum or plasma have been used as an indication of PCP exposure. This test has similar limitations and considerations to the urine test.

If this method is used, the following value may be used as a guidance value:

*Blood PCP* [[2]](#footnote-2)*:*

1 mg/L in serum or plasma

### Workplace exposure standard

The workplace exposure standard for PCP is:

* eight hour time weighted average (TWA) of 0.5 mg/m3.

A physical examination and urinary testing may be warranted if the results of air monitoring indicate frequent or potentially high exposure (half of the TWA or above).

**NOTE:** PCP is readily absorbed through the skin and air monitoring results may not be a true indication of exposure.

### Removal from work

Where total urinary PCP testing shows a level of greater than 0.25 mmol/mol creatinine:

* a repeat spot urine test for total PCP should be performed to confirm results
* a medical examination should be performed, with emphasis on the hepatic and renal systems and skin, and
* depending on medical examination findings, further tests may be needed including serum biochemistry, urea and electrolytes, and a coagulation profile.

Where a medical examination indicates the worker is displaying symptoms of exposure to PCP or where results of biological monitoring indicate exposure that may cause adverse health effects, the registered medical practitioner should consider recommending the worker be removed from PCP-related work.

A spot urine test for total PCP corrected for creatinine should be repeated every 30 days until the level falls below 0.25 mmol/mol creatinine and any adverse health effects are no longer observed.

When removal from PCP-related work is indicated the registered medical practitioner must provide the PCBU with the following recommendations:

* the worker should be removed from work with PCP, and
* the PCBU should review control measures and carry out recommended remedial action.

The worker must be informed of the results of health monitoring.

### Return to work

Should a worker be removed from PCP-related work, they must not return until the registered medical practitioner has:

* assessed them as medically fit, and
* made a recommendation to the PCBU that the worker can return to remediated PCP-related work.

This assessment should take into consideration the clinical condition of the worker, the worker’s urinary PCP levels and remediation of the circumstances that led to the symptoms if possible.

At termination of work in a PCP process

## Final medical examination

A final medical examination should be carried out with emphasis on the skin, noting abnormal lesions or irritancy.

Workers with health conditions or continuing symptoms due to PCP exposure should be advised to seek continuing medical examinations as organised by the registered medical practitioner supervising the health monitoring program.

A health monitoring report from the registered medical practitioner should be provided to the PCBU as soon as practicable after the completion of the monitoring program, and at regular intervals for longer term or ongoing health monitoring processes. The report must include:

* the name and date of birth of the worker
* the name and registration number of the registered medical practitioner
* the name and address of the PCBU who commissioned the health monitoring
* the date of the health monitoring
* any test results that indicate whether or not the worker has been exposed to a hazardous chemical
* any advice that test results indicate that the worker may have contracted an injury, illness or disease as a result of carrying out the work that triggered the requirement for health monitoring
* any recommendation that the PCBU take remedial measures, including whether the worker can continue to carry out the type of work that triggered the requirement for health monitoring, and
* whether medical counselling is required for the worker in relation to the work that triggered the requirement for health monitoring.

Potential health effects following exposure to PCP

## Route of occupational exposure

The primary routes of workplace exposure to PCP are via inhalation and skin absorption.

Accidental ingestion is unlikely except in cases of poor hygiene or poor work practices.

## Target organ/effect

The target organs and potential effects of PCP exposure include:

Table 1 Target organs and potential effects of PCP exposure

| Target organ | Effect |
| --- | --- |
| Skin and mucous membranes | Irritation |
| Eyes | Irritation  Impaired vision |
| Kidney | Impaired renal function |
| Liver | Hepatocellular damage |

## Acute effects

PCP decouples oxidative phosphorylation. As a result, part of the energy produced is lost as heat. The intensity of some metabolic processes in the body increase.

Systemic effects from acute PCP poisoning include:

* weakness
* loss of appetite
* gastrointestinal disturbance
* weight loss
* nausea
* vomiting
* chest pain
* excessive sweating
* fever
* headaches and dizziness
* inflammation of the conjunctiva
* corneal opacity
* tachycardia
* tachypnoea
* respiratory distress, and
* hepatic enlargement.

Following inhalation, respiratory irritation and shortness of breath can occur.

Dermal exposure can result in local skin irritation.

At very high concentrations, an individual may experience death, loss of consciousness, convulsions through heart failure, respiratory paralysis and lung oedema. In fatal cases, death may occur as early as three hours after the onset of symptoms. The risk of serious consequences is greater in hot weather.

Workers with significantly impaired liver or kidney function are possibly more susceptible to poisoning from this substance.

## Chronic effects

Chronic exposure is associated with:

* inflammation of the upper respiratory tract and bronchitis
* blood effects such as aplastic anaemia
* effects on the kidney and liver
* immunological effects
* irritation of the eyes, nose and skin
* increased prevalence of conjunctivitis
* chronic sinusitis
* polyneuritis, and
* dermatitis.

Medications that cause dehydration, or possess anticholinergic properties, and diuretics, phenothiazines, antihistamines and antidepressants may increase the susceptibility of exposed people to hyperthermia.

Aspirin can also uncouple oxidative phosphorylation when absorbed in large amounts and may enhance the risk of toxicity for PCP-exposed workers. Because PCP is highly protein-bound, workers taking medications on a long-term basis that have an affinity for plasma proteins may be at increased risk of PCP-induced toxicity. Such medications may include phenytoin, warfarin, frusemide, ethacrynic acid, naproxen and ibuprofen that, by competing with PCP for protein binding sites, can thereby increase the level of free PCP circulating in the blood enhancing the risk of potential toxic effects.

## Carcinogenicity

PCP has been classified as a Category 2 carcinogen according to the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) as it is suspected of causing cancer in humans.

## GHS classification

The following GHS health hazard classification for PCP has been taken from Safe Work Australia’s Hazardous Chemicals Information System:

Hazard category

Carcinogenicity – category 2

Acute toxicity – category 2 (fatal if inhaled)

Acute toxicity – category 3 (toxic in contact with skin)

Acute toxicity – category 3 (toxic if swallowed)

Specific target organ toxicity (single exposure) – category 3   
(may cause respiratory irritation)

Skin irritation – category 2

Eye irritation – category 2

## Source documents

Agency for Toxic Substances and Disease Registry (2001) *Toxicological Profile for Pentachlorophenol*, Agency for Toxic Substances and Disease Registry, United States Department of Health and Human Services, Public Health Service, Atlanta.

American Conference of Governmental Industrial Hygienists (ACGIH) (2017) *Documentation of the Threshold Limit Values and Biological Exposure Indices*, Pentachlorophenol, 7th Ed, Cincinnati.

DFG (2017) List of MAK and BAT Values.

[*Chemical analysis branch handbook, 9th Edition, Workplace and biological monitoring exposure analysis*](http://www.testsafe.com.au/__data/assets/pdf_file/0007/16387/Chemical-Analysis-Branch-Handbook-9th-edition-TS033.pdf), WorkCover NSW (PDF 3.39MB).

National Industrial Chemicals Notification and Assessment Scheme; Human Health Assessment Tier I: [Pentachlorophenol](https://www.nicnas.gov.au/search?query=Pentachlorophenol&collection=nicnas-meta).

PubChem Open Chemistry Database; [Compound Summary for CID 992 Pentachlorophenol](https://pubchem.ncbi.nlm.nih.gov/compound/992).

Safe Work Australia; [*Hazardous Chemicals Information System*](http://hcis.safeworkaustralia.gov.au/).

Safe Work Australia (2013); [*Workplace Exposure Standards for Airborne Contaminants*](https://www.safeworkaustralia.gov.au/system/files/documents/1705/workplace-exposure-standards-airborne-contaminants-v2.pdf)(PDF 873KB).



Health monitoring report

Pentachlorophenol (PCP)



# Health monitoring report – Pentachlorophenol (PCP)

**This health monitoring report is a confidential health record and must not be disclosed to another person except in accordance with the Work Health and Safety Regulations or with the consent of the worker.**

There are two sections. Complete both sections and all questions as applicable.

**Section 1** A copy of this section should be forwarded to the person conducting the business or undertaking (PCBU) who has engaged your services.

**Section 2** may contain confidential health information. Information that is required to be given to the PCBU should be summarised in Section 1.

Section 1 – A copy of this section to be provided to the PCBU

Person conducting a business or undertaking

**Company/organisation name:** Click here to enter text.

**Site address:** Click here to enter text.

**Suburb:** Click here to enter text. **Postcode:** Click here to enter text.

**Site Tel:** Click here to enter text. **Site Fax:** Click here to enter text.

**Contact Name:** Click here to enter text.

Other businesses or undertakings engaging the worker  N/A  
(include a separate section for each PCBU)

**Company/organisation name:** Click here to enter text.

**Site address:** Click here to enter text.

**Suburb:** Click here to enter text. **Postcode:** Click here to enter text.

**Site Tel:** Click here to enter text. **Site Fax:** Click here to enter text.

**Contact Name:** Click here to enter text.

Worker details (tick all relevant boxes)

**Surname:** Click here to enter text. **Given names:** Click here to enter text.

**Date of birth:** Click here to enter a date. **Sex:**  Male  Female

**Address:** Click here to enter text.

**Suburb:** Click here to enter text. **Postcode:** Click here to enter text.

**Current job:** Click here to enter text.

**Tel (H):** Click here to enter text. **Mob:** Click here to enter text.

**Date started employment:** Click here to enter a date.

Employment in PCP risk work (tick all relevant boxes)  
(information provided by the PCBU)

New to PCP work

New worker but not new to PCP work

Current worker continuing in PCP work

**Worked with PCP since:** Click here to enter a date.

**Risk assessment completed:**  Yes  No

Work environment assessment (tick all relevant boxes)  
(information provided by the PCBU)

**Date of assessment:** Click here to enter a date.

**PCP industry/use**

Handling timber previously preserved with PCP

Other (specify):

|  |
| --- |
| **Other chemicals the worker may be exposed to:** Click here to enter text. |

| Controls |  |  |
| --- | --- | --- |
| Wear gloves | Yes | No |
| Respirator use | Yes | No |
| Respirator type Click here to enter text. | | |
| Local exhaust ventilation | Yes | No |
| Overalls/work clothing | Yes | No |
| Laundering by employer | Yes | No |
| Wash basins and showers (with hot and cold water) | Yes | No |
| Other please specify |  |  |

Health monitoring results

**Biological monitoring results**

Include/attach test results that indicate whether or not the worker has been exposed

| Date | Tests performed | Recommended action or comment |
| --- | --- | --- |
| Click here to enter text. | Click here to enter text. | Click here to enter text. |
| Click here to enter text. | Click here to enter text. | Click here to enter text. |
| Click here to enter text. | Click here to enter text. | Click here to enter text. |
| Click here to enter text. | Click here to enter text. | Click here to enter text. |

|  |
| --- |
| **Comments about health monitoring results (for example any early indications or diagnosis of injury, illness or disease):** Click here to enter text. |

Recommendations (by registered medical practitioner) (tick all relevant boxes)

**Further/additional health monitoring for worker**

This is the final health monitoring report

Repeat health assessment in Click here to enter text. month(s) / Click here to enter text. week(s)

Counselling required

Medical examination by registered medical practitioner. On Click here to enter a date.

Referred to Medical Specialist (respiratory/dermatology/other). On Click here to enter a date.

**Recommendations to PCBU**

The worker is suitable for work with pentachlorophenol

Review workplace controls

The worker should be removed from work with pentachlorophenol. On Click here to enter a date.

The worker is fit to resume work. On Click here to enter a date.

Biological monitoring results indicate unacceptably high exposure levels

**Specialist’s name:** Click here to enter text.

**Additional comments or recommendations:** Click here to enter text.

Registered medical practitioner (responsible for supervising health monitoring)

**Name:** Click here to enter text.

| ****Signature:**** |
| --- |
|  |

**Date:** Click here to enter a date.

**Tel:** Click here to enter text. **Fax:** Click here to enter text.

**Registration Number:** Click here to enter text.

**Medical Practice:** Click here to enter text.

**Address:** Click here to enter text.

**Suburb:** Click here to enter text. **Postcode:** Click here to enter text.

Section 2 – This section to be retained by the registered medical practitioner

Person conducting a business or undertaking

**Company/organisation name:** Click here to enter text.

**Site address:** Click here to enter text.

**Suburb:** Click here to enter text. **Postcode:** Click here to enter text.

**Site Tel:** Click here to enter text. **Site Fax:** Click here to enter text.

**Contact Name:** Click here to enter text.

Other businesses or undertakings engaging the worker  N/A

**Company/organisation name:** Click here to enter text.

**Site address:** Click here to enter text.

**Suburb:** Click here to enter text. **Postcode:** Click here to enter text.

**Site Tel:** Click here to enter text. **Site Fax:** Click here to enter text.

**Contact Name:** Click here to enter text.

Worker details (tick all relevant boxes)

**Surname:** Click here to enter text. **Given names:** Click here to enter text.

**Date of birth:** Click here to enter a date.

**Sex:**  Male  Female  Pregnant/breastfeeding

**Address:** Click here to enter text.

**Suburb:** Click here to enter text. **Postcode:** Click here to enter text.

**Current job:** Click here to enter text.

**Tel (H):** Click here to enter text. **Mob:** Click here to enter text.

**Date started employment:** Click here to enter a date.

Past employment and exposure details (tick all relevant boxes)

**Have you ever worked in any of the following jobs?**

If you answered ‘yes’ to any of the questions, please advise if you experienced any symptoms such as cough or wheeze or asthma when working.

|  |  |  |  | **Comments** (all ‘yes’ answers) |
| --- | --- | --- | --- | --- |
| Handling timber previously preserved with PCP | | No | Yes | Click here to enter text. |
| Other (please specify) | | No | Yes | Click here to enter text. |

General health questionnaire (tick all relevant boxes)

|  |  |  |  | **Comments** (all ‘yes’ answers) |
| --- | --- | --- | --- | --- |
| Did you suffer any incapacity lasting two weeks or longer in the last two years? | | No | Yes | Click here to enter text. |
| Have you ever had any operations or accidents or been hospitalised for any reason | | No | Yes | Click here to enter text. |
| Are you currently being treated by a doctor or other health professional for any illness or injury | | No | Yes | Click here to enter text. |
| Are you currently receiving any medical treatment or taking any medications. Please detail. | | No | Yes | Click here to enter text. |
| Do you currently smoke | | No | Yes | Click here to enter text. |
| Do you practice personal hygiene at work, for example nail biting, frequency of hand washing, eating or smoking, clean shaven, shower and change into clean clothes at end of shift | | No | Yes |  |

Specific health questions (tick all relevant boxes)

| **Do you have or have you ever had:** | |  | **Comments** (all ‘yes’ answers) |
| --- | --- | --- | --- |
| Blurred vision or other vision problems | No | Yes | Click here to enter text. |
| Itchy eyes, runny or congested nose | No | Yes | Click here to enter text. |
| Shortness of breath on exertion | No | Yes | Click here to enter text. |
| Wheezing, bronchitis or asthma now or in the past | No | Yes | Click here to enter text. |
| Any other lung or respiratory conditions (emphysema, pneumonia or sinusitis) | No | Yes | Click here to enter text. |
| Liver disease (including alcohol related or other hepatitis) | No | Yes | Click here to enter text. |
| Kidney or bladder disease | No | Yes | Click here to enter text. |
| Blood disorders | No | Yes | Click here to enter text. |
| Any neurological condition affecting nerves in your feet or hands, your coordination or balance | No | Yes | Click here to enter text. |
| Heavy use or substance abuse of drugs or alcohol | No | Yes | Click here to enter text. |
| Skin disorders or dermatitis | No | Yes | Click here to enter text. |
| Any form of cancer | No | Yes | Click here to enter text. |
| Any other significant health conditions | No | Yes | Click here to enter text. |

General health assessment (if applicable)

**Height:** Click here to enter text. cm **Weight:** Click here to enter text. kg

**BP:** Click here to enter text. / Click here to enter text. mmHg

**Urinalysis**

**Blood:**  Normal  Abnormal

**Protein:** Click here to enter text. **Referred for further testing**

**Sugar:** Click here to enter text.  No  Yes

| **Respiratory system** |  |  | **Medical comments** (for all abnormal) |
| --- | --- | --- | --- |
| Breathing normal and regular in character | Yes | No | Click here to enter text. |
| Auscultation normal | Yes | No | Click here to enter text. |
| Signs of past/present respiratory disease | No | Yes | Click here to enter text. |
| Skin |  |  |  |
| Eczema, dermatitis or allergy | No | Yes | Click here to enter text. |
| Skin cancer or other abnormality | No | Yes | Click here to enter text. |
| Evidence of nail biting | No | Yes | Click here to enter text. |
| Other | No | Yes | Click here to enter text. |



Figure 1 Template of the human body to indicate the location of abnormalities

| **Eye** |  |  | **Medical comments** (for all abnormal) |
| --- | --- | --- | --- |
| Evidence of eye irritation | No | Yes | Click here to enter text. |

Biological monitoring results

Include/attach at least the previous two test results (if available)

| Date | Tests performed | Recommended action or comment |
| --- | --- | --- |
| Click here to enter a date. | Click here to enter text. | Click here to enter text. |
| Click here to enter a date. | Click here to enter text. | Click here to enter text. |
| Click here to enter a date. | Click here to enter text. | Click here to enter text. |
| Click here to enter a date. | Click here to enter text. | Click here to enter text. |

Other medical history, family medical history, current medication, comments, tests or recommendations (use separate sheet if necessary)

Click here to enter text.

Registered medical practitioner (responsible for supervising health monitoring)

**Name:** Click here to enter text.

| ****Signature:**** |
| --- |
|  |

**Date:** Click here to enter a date.

**Tel:** Click here to enter text. **Fax:** Click here to enter text.

**Registration Number:** Click here to enter text.

**Medical Practice:** Click here to enter text.

**Address:** Click here to enter text.

**Suburb:** Click here to enter text. **Postcode:** Click here to enter text.

1. See [Chemical analysis branch handbook, 9th Edition, Workplace and biological monitoring exposure analysis](http://www.testsafe.com.au/__data/assets/pdf_file/0007/16387/Chemical-Analysis-Branch-Handbook-9th-edition-TS033.pdf), WorkCover NSW (PDF 3.39MB) for more details. The entry is accompanied by an ‘Under review’ notation. [↑](#footnote-ref-1)
2. DFG (2017) List of MAK and BAT Values. Intended to correspond to an air concentration of 0.05 mg/m3. [↑](#footnote-ref-2)