Health monitoring

Guide for butanone (methyl ethyl ketone, MEK)





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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.

# Butanone (methyl ethyl ketone, MEK)

Butanone (CAS 78-93-3) is a colourless, flammable liquid with a sweet acetone-like odour.

*Synonyms:* 2-butanone, methyl ethyl ketone or MEK.

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

Butanone is used in paints, glues and finishes because it quickly evaporates in air and will dissolve in many substances. The major uses of butanone are:

* solvent in application of protective coatings and adhesives
* magnetic tape production
* dewaxing of lubricating oils
* extraction solvent in food processing
* production of varnishes and glues
* production of synthetic rubber
* production of paraffin wax
* industrial and automotive paint
* leather cleaning
* laboratory work
* production of cleaning agents, and
* manufacture of explosives and smokeless gun powders.

**Sources of non-occupational exposure**

Butanone exposure may also occur outside of the workplace. Exposures may occur from use of or exposure to:

* household products such as lacquer, varnishes, paint removers and glues
* detergents
* printing inks
* textile dyes
* adhesive thinners
* fragrances
* enamel removers
* insulating materials
* corrosion inhibitors, and
* aerosol propellants.

Butanone is found at low levels in some food products (fruits and vegetables, grains, dairy and meat) and higher levels for food with bacterial sources present (cheese, yoghurt).

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

Collection of demographic, medical and occupational history

Physical examination with emphasis on the central nervous system and skin

Urinary butanone (MEK) levels

Health monitoring before starting work in a butanone process

Health monitoring for butanone 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 butanone
* 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.

An initial physical examination should place emphasis on the central nervous system (CNS) and skin if work and medical history indicates this is necessary, for example through the presence of symptoms. Examination of the CNS as baseline and examination of the skin for changes including dermatitis is important as existing symptoms could be aggravated by exposure to butanone.

During exposure to a butanone process

## Monitoring exposure to butanone

Where workers are exposed, suspected of being exposed or are concerned about exposure to butanone, 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 butanone resulting in excessive exposure to workers or when workers develop symptoms of butanone exposure.

Butanone may be absorbed by the inhalational, dermal and oral routes, with the inhalational route the most likely in the occupational setting. Pulmonary retention has been estimated to be 50 to 55 per cent.

Once absorbed, butanone is rapidly metabolised to primarily to 2,3-butanediol, and to a lesser extent, 2‑butanol. Metabolism is the primary elimination pathway for butanone; less than one per cent of unchanged butanone is excreted in urine, two to three percent of unchanged butanone is excreted in exhaled breath, two per cent of the absorbed dose is excreted in urine as 2,3-butanediol and the remaining 95 per cent is eventually metabolised in the body to simple compounds such as carbon dioxide and water.

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

* urinary butanone levels

Where urinalysis is performed, the following value should be considered when assessing exposure to butanone:

Biological exposure standard for butanone[[1]](#footnote-1)

*Urinary butanone:*

0.03 mmol/L

Sampling should occur at the end of the shift or at the end of exposure if exposure is not consistent through the shift. As elimination of butanone following exposure is rapid, sampling time is critical. The results are an indicator of exposure on the day of sampling only. As urinary excretion of butanone is independent of urinary flow rate, creatinine correction is not recommended.

The presence of butanone in urine is most likely due to occupational exposure, though non‑occupational exposure is possible through dietary or other sources. Urinary butanone may also be an indicator of 2-butanol exposure. Therefore, the test is not specific for occupational exposure to butanone.

Co-exposure to other solvents or ingestion of alcoholic beverages may decrease butanone metabolism, resulting in higher urinary levels of butanone. This may not indicate an overestimation of health risks.

### Workplace exposure standard

The workplace exposure standard for butanone is:

* eight hour time weighted average (TWA) of 150 ppm (445 mg/m3), and
* short term (15 minute time weighted average) exposure limit (STEL) of 300 ppm (890 mg/m3).

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

### Removal from work

Where a medical examination indicates the worker is displaying symptoms of exposure to butanone 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 butanone-related work.

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

* the worker should be removed from work with butanone, 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 butanone-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 butanone-related work.

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

At termination of work in a butanone process

## Final medical examination

A urine sample should be collected on the last day of the worker’s final shift, and a final medical examination should be carried out at the same time or as soon as possible thereafter. Emphasis should be placed on the CNS, peripheral nervous system (PNS) and skin.

Workers with health conditions or continuing symptoms due to butanone 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 butanone

## Route of occupational exposure

The primary route of exposure to butanone is via inhalation and to a lesser extent via skin contact. Accidental ingestion may be possible, especially when eating or smoking with contaminated hands.

## Target organ/effect

The target organs and potential effects of butanone exposure include:

Table 1 Target organs and potential effects of butanone exposure

| Target organ | Effect |
| --- | --- |
| Central nervous system | HeadacheNauseaDrowsiness Unconsciousness |
| Skin | Irritation |
| Eyes | Irritation |
| Respiratory tract | Irritation of the nose and throat |

## Acute effects

The following acute effects may be exhibited after exposure to butanone:

**Respiratory system**

* irritation to respiratory tissues
* slight nose and throat irritation
* hyperventilation, or
* impaired lung function.

**Eye**

* conjunctival irritation, or
* visual disturbances.

**CNS (after high concentration exposure)**

* unconsciousness
* dizziness
* loss of balance
* memory loss
* fatigue
* tremors
* muscle twitches
* impairments in reaction time
* headache
* impairment of attention
* psychomotor speed
* short-term memory loss
* demand on shifts in cognitive processing
* depression
* asthenia
* uncoordinated gait
* irritability
* sleep disturbances
* decreases in nerve conduction velocity
* CNS depression, or
* numbness of the extremities.

Co-exposure to other solvents, such as n-hexane, methyl n-butyl ketone, carbon tetrachloride and chloroform, may enhance solvent exposure-related neurotoxic effects.

**Cardiovascular system**

* decreased blood pressure
* increased pulse rate, or
* tachycardia.

**Skin**

* dermatitis.

**Gastrointestinal system**

* abdominal pains
* loss of appetite
* bad taste
* nausea, or
* weight loss.

**Musculoskeletal system**

* bone, joint and vertebral column weaknesses.

## Chronic effects

Reported chronic or subchronic effects following butanone exposure have largely been restricted to the central and peripheral nervous systems. These include:

* general solvent-like effects such as peripheral and central nerve fibre degeneration
* cerebellar and brainstem atrophy
* severe chronic headache, dizziness, loss of balance, memory loss, fatigue, tremors, muscle twitches, tachycardia
* encephalopathy
* peripheral neuropathy
* distal axonopathy, or
* persistent neurological impairment.

## Carcinogenicity

Butanone has not been classified as carcinogenic according to the Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

## GHS classification

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

Hazard category

Eye irritation – category 2A

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

Specific target organ toxicity (single exposure) – category 3
(may cause drowsiness or dizziness)

## Source documents

Agency for Toxic Substances and Disease Registry (1992); [Toxicological Profile for 2-Butanone](https://www.atsdr.cdc.gov/toxprofiles/tp29.pdf); US Public Health Service (PDF 2.28MB).

American Conference of Governmental Industrial Hygienists (ACGIH) (2017); *Methyl Ethyl Ketone: BEI(R).*

[*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).

Lauwerys, R.R. and Hoet, P. (2001) *Industrial Chemical Exposure Guidelines for Biological Monitoring*, 3rd Ed, Lewis Publishers, Boca Raton.

National Industrial Chemical Notification and Assessment Scheme; Human Health Tier II Assessment for 2-Butanone <https://www.nicnas.gov.au/search?query=2-Butanone&collection=nicnas-meta>.

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).

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

US Environmental Protection Agency (2003); Toxicological Review of Methyl Ethyl Ketone.



Health monitoring report

Butanone (methyl ethyl ketone, MEK)



# Health monitoring report – Butanone (methyl ethyl ketone, MEK)

**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 butanone risk work (tick all relevant boxes)
(information provided by the PCBU)

[ ]  New to butanone work

[ ]  New worker but not new to butanone work

[ ]  Current worker continuing in butanone work

**Worked with butanone 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.

**Butanone industry/use**

[ ]  Household products including lacquer, varnishes, paint removers and glues

[ ]  Detergents [ ]  Printing inks

[ ]  Textile dyes [ ]  Adhesive thinners

[ ]  Fragrances [ ]  Enamel removers

[ ]  Insulating materials [ ]  Corrosion inhibitors

[ ]  Aerosol propellants [ ]  Other (specify): Click here to enter text.

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

| Controls |  |  |
| --- | --- | --- |
| Wear gloves | [ ]  Yes | [ ]  No |
| Wear eye protection | [ ]  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 butanone

[ ]  Review workplace controls

[ ]  The worker should be removed from work with butanone. 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.

**Working with Butanone (MEK) in the following products**

|  |  |  |  | **Comments** (all ‘yes’ answers) |
| --- | --- | --- | --- | --- |
| Household products including lacquer, varnishes, paint removers and glues | [ ]  No | [ ]  Yes | Click here to enter text. |
| Detergents | [ ]  No | [ ]  Yes | Click here to enter text. |
| Printing inks | [ ]  No | [ ]  Yes | Click here to enter text. |
| Textile dyes | [ ]  No | [ ]  Yes | Click here to enter text. |
| Adhesive thinners | [ ]  No | [ ]  Yes | Click here to enter text. |
| Fragrances | [ ]  No | [ ]  Yes | Click here to enter text. |
| Enamel removers | [ ]  No | [ ]  Yes | Click here to enter text. |
| Insulating materials | [ ]  No | [ ]  Yes | Click here to enter text. |
| Corrosion inhibitors | [ ]  No | [ ]  Yes | Click here to enter text. |
| Aerosol propellants | [ ]  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 or reddened eyes | [ ]  No | [ ]  Yes | Click here to enter text. |
| Runny or congested nose | [ ]  No | [ ]  Yes | Click here to enter text. |
| Chest pains or irregular heartbeats or suffered from rheumatic fever | [ ]  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. |
| Breathing problems, nasal blockage, nose bleeds or lump in nose | [ ]  No | [ ]  Yes | Click here to enter text. |
| Abdominal pain, loss of appetite | [ ]  No | [ ]  Yes | Click here to enter text. |
| Severe stomach pain or peptic ulcers | [ ]  No | [ ]  Yes | Click here to enter text. |
| Anaemia or other blood disorders | [ ]  No | [ ]  Yes | Click here to enter text. |
| Fits, blackouts, dizziness, balance problems or fainting | [ ]  No | [ ]  Yes | Click here to enter text. |
| Epilepsy | [ ]  No | [ ]  Yes | Click here to enter text. |
| Problems with memory and concentration | [ ]  No | [ ]  Yes | Click here to enter text. |
| Depression | [ ]  No | [ ]  Yes | Click here to enter text. |
| Sleep disturbance | [ ]  No | [ ]  Yes | Click here to enter text. |
| Severe head or spinal injury resulting in hospitalisation | [ ]  No | [ ]  Yes | Click here to enter text. |
| Severe headaches or migraines | [ ]  No | [ ]  Yes | Click here to enter text. |
| Chronic fatigue or tiredness | [ ]  No | [ ]  Yes | Click here to enter text. |
| Significant weight loss | [ ]  No | [ ]  Yes | Click here to enter text. |
| Psychiatric or nervous condition (including anxiety, depression or severe or abnormal stress reaction) that has or does require professional counselling or medication | [ ]  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. |
| 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. |

**Registered medical practitioner to provide comments for any ‘Yes’ responses (reference Question number):**

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

| **Cardiovascular system** |  |  | **Medical comments** (for all yes/abnormal) |
| --- | --- | --- | --- |
| Blood pressure | [ ]  Normal | [ ]  Abnormal | Click here to enter text. |
| Heart rate | [ ]  Normal | [ ]  Abnormal | Click here to enter text. |
| Heart sounds  | [ ]  Normal | [ ]  Abnormal | Click here to enter text. |
| Murmurs present | [ ]  No | [ ]  Yes | Click here to enter text. |
| Evidence of cardiac failure/oedema | [ ]  No | [ ]  Yes | Click here to enter text. |
| Respiratory system |  |  |  |
| 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. |
| Redness, irritation of nose | [ ]  No | [ ]  Yes | Click here to enter text. |
| Nervous system |  |  |  |
| Muscular tone, co-ordination | [ ]  Normal | [ ]  Abnormal | Click here to enter text. |
| Tremor | [ ]  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. |
| Mouth – stomatitis | [ ]  No | [ ]  Yes | Click here to enter text. |
| Gums – ulcers or bleeding | [ ]  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 [↑](#footnote-ref-1)