



## Sample Report

# Home Air Check™ Indoor Air Quality Report

Client Sample ID: Kitchen  
Laboratory ID: 6006-1

Home Air Analysis For: John Taylor  
Home Tested: 801 Queens Street  
Balmoral, Queensland 4171  
Australia

Report Number: 6006

Order Date: 20/01/2017  
Scan Date: 23/01/2017  
Report Date: 27/01/2017

Client Sample ID: Kitchen  
Sample Volume (L): 40  
Date Sampled: 14/01/2017  
Sample Type: TDT 112J

Location/Notes:

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**Thank you for using Home Air Check!**

If you have questions about your report, please  
contact [support@homeaircheck.com.au](mailto:support@homeaircheck.com.au)

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Home Air Check™ is the most advanced, trusted air testing product on the market today for identifying chemical and mould contamination in a home. Many indoor air quality (IAQ) issues identified by Home Air Check can be easily remediated or eliminated. This test is an invaluable tool for homeowners and renters because it provides important information on potential contamination issues in the home that cannot be detected by sight alone. Acting upon the information in this report will enable you to dramatically improve the air quality in your home, creating a healthier environment for you and your family.

## What's in your Indoor Air Quality Report?

Your Indoor Air Quality Report has several sections describing different aspects of your home's air quality.

- 1. The Total Volatile Organic Compound (TVOC) level:** a general indicator of the IAQ in your home. Typically, a lower TVOC means better IAQ in your home.
- 2. The Total Mould Volatile Organic Compound (TMVOC) level:** an assessment of the quantity of actively growing mould in your home. Levels above 8 ng/L indicate that there is a source of actively growing mould in your home.
- 3. The Contamination Index™ (CI):** shows the types of air-contaminating products and materials that are present in your home. Each CI category indicates how your home compares to thousands of other homes, and provides some suggestions for where these products and materials might be found. The CI is divided into 3 main sections: Lifestyle Sources, Building-Related Sources, and Mixed Building and Lifestyle Sources. Lifestyle sources are those that the occupants of the home bring into the home and can usually be easily remediated and eliminated. Building-Related Sources are those that are typically part of the structure of the home and may be more difficult to reduce in the short term. Mixed Building and Lifestyle Sources are those that could belong to either category and investigation on your part may be necessary to determine which source is more likely. Levels indicated as Elevated or Severe should be immediately addressed, and those listed as Moderate are areas that can be improved over time. Since there are potentially many sources of VOCs, homes can often be re-contaminated even after sources have been removed because new products are constantly being brought into the home. Home occupants should take note of this fact, and view IAQ as a continuous improvement process and plan to re-test the home every 6-12 months (more often if health issues exist).
- 4. Additional Resources:** listing of various government, health, and consumer organisation websites where home occupants can go to find more information on VOC and mould contamination, the sources of contamination, and the possible chemical compounds contained therein. In addition, one may be able to find further suggestions for dealing with the contamination and the next steps for improving air quality.

Prism Analytical Technologies, Inc., the creator of Home Air Check, has been performing air quality assessments to industry and environmental consultants since 1995. Reference method NIOSH 2549 and Prism A2-HAC.



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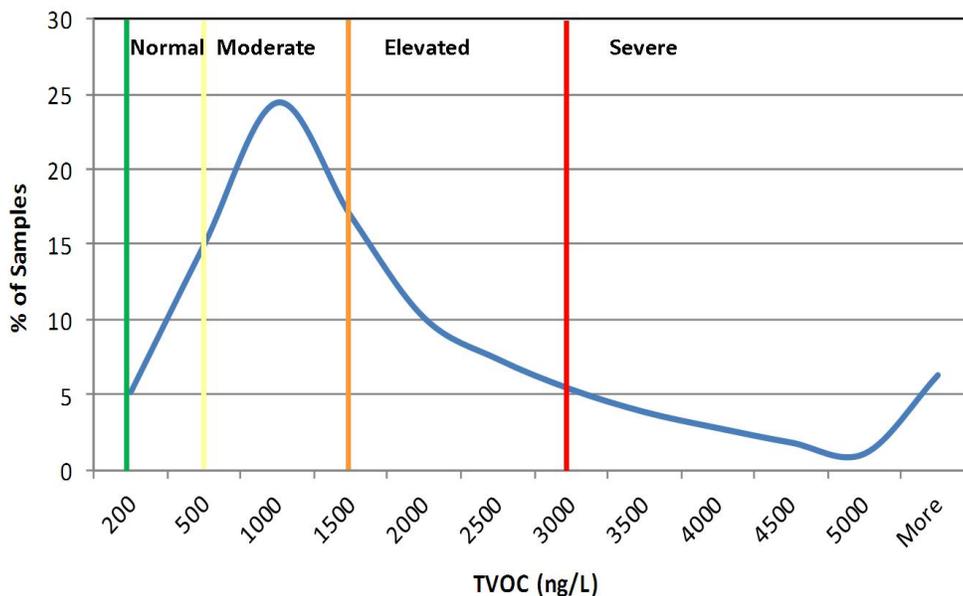
Client Sample ID: Kitchen  
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### Total Volatile Organic Compound (TVOC) Summary

Your TVOC Level is (ng/L or ug/m3): 2300

HAC Air Quality Level: **Elevated**

#### All Home Air Check TVOC Air Quality Indicator



The chart above shows the TVOC levels for all homes tested using Home Air Check. The blue line represents the relationship between the percentage of homes (indicated on the vertical y-axis) and the TVOC level (indicated on the horizontal x-axis). The green, yellow, orange, and red vertical bars represent divisions between Normal, Moderate, Elevated, and Severe TVOC levels. At the Normal level, non-chemically sensitive individuals should not experience issues because of VOCs. As the TVOC value increases into the Moderate, Elevated, or Severe levels, individuals may experience aggravated health problems, and therefore, the need to address VOC issues becomes more critical. However, reductions in VOCs can be made at any level.

AUS government guidelines do not specify a TVOC limit for indoor air. The U.S. Green Building Council (USGBC) recommends 500 ng/L as the upper TVOC limit. TVOC levels below these limits indicate that the IAQ is acceptable for most individuals; however, chemically sensitive persons may require lower levels. TVOC levels between 500 and 1,500 ng/L indicate that the air quality is marginal and some effect on the occupants is possible. Levels above 1,500 ng/L indicate that your IAQ should definitely be improved.

The presence of chemicals in your home can cause a wide range of problems, ranging from an unpleasant odour to physical symptoms (burning and irritation in the eyes, nose, and throat; headaches; nausea; nervous system effects; severe illness; etc.). In some cases, these conditions may make the home unlivable. Anyone with respiratory issues like asthma and allergies, as well as children, the elderly, and pregnant women are more susceptible to poor indoor air quality than healthy individuals. However, at elevated TVOC levels even healthy individuals are likely to experience ill effects. The following websites can offer more information:

US EPA: <http://www.epa.gov/iaq/>

American Lung Association: <http://www.lung.org/healthy-air/home/>

World Health Organisation:

<http://www.euro.who.int/en/what-we-do/health-topics/environment-and-health/air-quality/policy/indoor-air-quality>

Lawrence Berkeley National Laboratory: <http://www.iaqscience.lbl.gov/voc-introduction.html>

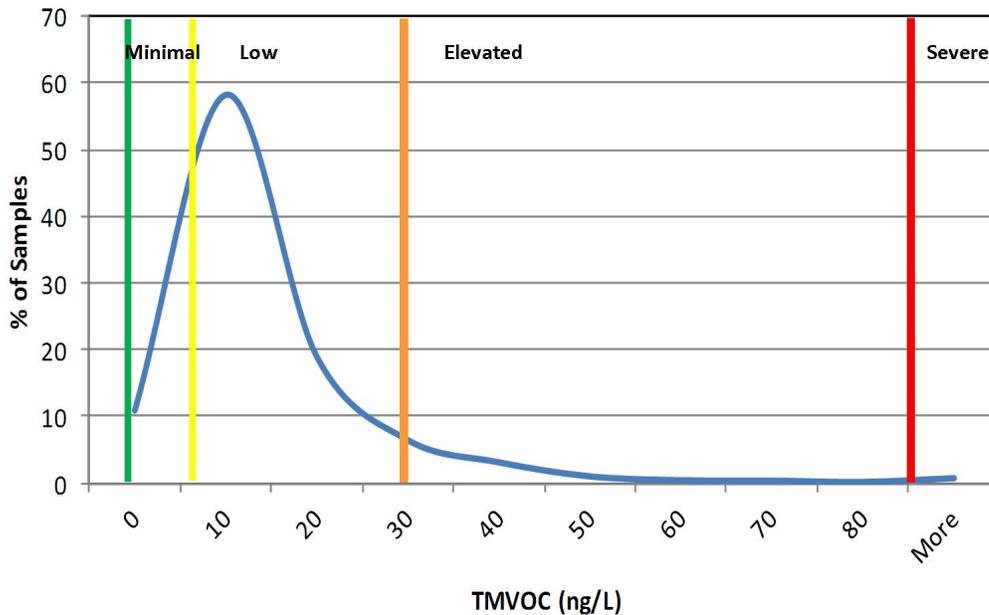
The Contamination Index (CI) in the next pages of this report will help guide you through determining what types of products or materials in the home could be problematic for your IAQ, and will provide some recommendations to help reduce or eliminate them.

**Total Mould Volatile Organic Compound (TMVOC) Summary**

Your TMVOC Level is (ng/L or ug/m3): 32

Active Mould Level: **Elevated**

**All Home Air Check TMVOC  
Active Mould Indicator**



The chart above shows the TMVOC level for all homes tested using Home Air Check. The line represents the relationship between the percentage of homes (indicated on the vertical y-axis) and the TMVOC level (indicated on the horizontal x-axis). The green, yellow, orange, and red vertical bars represent divisions between Minimal, Low, Elevated, and Severe TMVOC levels.

The TMVOC value is an assessment of the quantity of actively growing mould in your home. Like TVOC, AUS government guidelines do not specify a limit for TMVOC. Typically, if there is no plumbing leak, condensation, or water intrusion into the home, there will not be a mould problem. If active mould growth is indicated, the first step in fixing the problem is to find and repair the water leak, which is typically from the roof, plumbing, windows, or condensation.

Levels below 8 ng/L are typical for most homes and should not cause great concern for healthy individuals. Levels between 8 and 30 ng/L indicate a low level of mould which, generally, affects only people who are sensitive to moulds.

Levels above 150 ng/L indicate that a high level of active mould growth is present and it is likely that nearly all occupants of the home will be affected.

For sensitive individuals, these cutoff levels may need to be reduced by up to a factor of four, depending on the degree of sensitivity. Always consult a mould remediation specialist before attempting to remove mould.



**Contamination Index™**

Use the Contamination Index (CI) below to help you find products in your home that may be affecting your indoor air quality. Removing or reducing these products will improve your air quality.

	Contamination Index Category	Severity	Description and Suggestions for VOC Reduction
<b>Lifestyle Related Sources</b>	<b>Personal Care Products</b>	<b>Moderate</b>	Personal care products include soap, deodorant, lotions, perfumes, hair coloring supplies, nail care supplies, oral hygiene products, etc. They contain many VOCs that will dissipate if use is discontinued or reduced. Consider storing these products in a tight fitting container when not in use, and dispose of unused products. Also, run an exhaust fan or open a window when dispensing these products.
	<b>Alcohol Products</b>	<b>Elevated</b>	VOCs from alcohol can come from household cleaning products, antiseptic wipes, hand sanitizers, some solvents, reed diffusers, consumable alcohol, and some pharmaceuticals. These concentrations will be reduced by removing unnecessary products or proper storage of those materials in a tight fitting container. Consolidate cleaning products to the essentials. Consider switching to alternative methods of cleaning and sanitizing, e.g., baking soda, vinegar, borax, steam, etc., and ventilate the area during and after cleaning.
	<b>Odorants and Fragrances</b>	<b>Moderate</b>	VOCs in this category can come from scented candles, potpourri, air fresheners, scented cleaning products, and scented personal care products. Reduce use of scented products and store unused products in a tight fitting container.
	<b>Dry Cleaning Solvents</b>	<b>Normal</b>	Typical dry-cleaning methods employ the use of carcinogenic chemicals. Dry-cleaning should be allowed to vent outside, without plastics bags, before being placed inside. Consider switching to a dry-cleaner that uses environmentally friendly methods.
	<b>Medicinals</b>	<b>Normal</b>	Ointments and creams, topical first aid/pain relievers.
<b>Building Related Sources</b>	<b>Paints, Varnishes, and Coatings</b>	<b>Elevated</b>	Typically, VOCs from paints and coatings can linger for several months, sometimes longer. Begin ventilating the home immediately, and locate and dispose of paint cans and related supplies. Consider using low-VOC paints/coatings in the future.
	<b>PVC Cement</b>	<b>Moderate</b>	PVC cement is used to join pieces of PVC pipe together, usually for plumbing. Chemical compounds in these products can cause respiratory irritation and headaches. Ventilate the area during and after use.
	<b>HFCs and CFCs (Freons™)</b>	<b>Normal</b>	Most often used as refrigerants for air conditioners and refrigerator/freezers and propellants for blown-in insulation, cushions, aerosol cans, etc. Many of these chemical compounds are being phased out because of the Montreal Protocol.



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**Mixed Building and Lifestyle Sources**

Contamination Index Category	Severity	Description and Suggestions for VOC Reduction
<b>Adhesives-Toluene Based</b>	<b>Normal</b>	Adhesives are used in many locations in the construction and maintenance of the home, and normally these VOCs will dissipate over time. Additionally, toluene-based adhesives can be found in arts and crafts supplies and automotive products and should be located and removed or properly stored in a tight fitting container.
<b>Gasoline</b>	<b>Moderate</b>	VOCs from gasoline are typically a result of off-gassing from gas containers and gas-powered equipment such as lawnmowers, snow blowers, mini-bikes, etc. that are stored in attached garages or basements. These items should be stored externally to the home. Additionally, gasoline VOCs can linger on clothing after refueling an automobile at a gas station. A prior spill in a garage or basement can also soak into the flooring and add to the VOC level. Benzene is found in gasoline and is a known carcinogen. Therefore, it is strongly recommended that the above removal/storage actions be followed immediately.
<b>Fuel Oil, Diesel Fuel, Kerosene</b>	<b>Normal</b>	Often found in garages and basements. These fuels are not very volatile so will not readily get into the air, but they can linger for a long time and produce a strong, unpleasant odor.
<b>Moth Balls (Naphthalene Based)</b>	<b>Normal</b>	Insecticide/pesticide; use only in a tightly closed container. May also be present with p-Dichlorobenzene-based moth crystals.
<b>Moth Crystals (p-Dichlorobenzene Based)</b>	<b>Normal</b>	Insecticide/pesticide; use only in a tightly closed container. May also be present with Naphthalene-based moth balls.
<b>Light Hydrocarbons</b>	<b>Normal</b>	Building materials; aerosol cans; fuel for cooking/camping/lighters; liquefied petroleum gas (LPG); refrigerant; natural gas; propellant; blowing agent.
<b>Light Solvents</b>	<b>Elevated</b>	Stoddard solvent; mineral spirits; some paints, varnish, enamels; wax remover; adhesives; automotive products; penetrating oils. Many of these are present in common household products; however, recent renovation or construction will increase these levels. Increase ventilation during and after use of these products. High levels of Gasoline can contribute to the Light Solvents.
<b>Methylene Chloride</b>	<b>Normal</b>	Automotive products; degreasing solvent; paint stripper; adhesive remover; aerosol propellant; insecticide.

**Notes**



## Additional Resources

There are many online sources of information on indoor air quality and the sources that contribute to poor IAQ. For your benefit, we have listed some of the best places to find more in-depth information on these topics, and to gain further insight into how to improve your overall IAQ. These links are created and maintained by organisations other than Home Air Check and its parent company Prism Analytical Technologies, Inc., and therefore, we cannot guarantee the accuracy or completeness of this outside information. In addition, we do not endorse or advocate the products referenced on this list or these websites. For your convenience, these resources are also available at <http://www.homeaircheck.com.au/resource-centre>.

## IAQ Organisations & Reference Sources

- [Building Research Establishment Environmental Assessment Method \(BREEAM\)](#)
- [Chartered Institution of Building Services Engineers \(CIBSE\)](#)
- [Committee on the Medical Effects of Air Pollutants \(COMEAP\)](#)
- [Health and Safety Executive](#)
- [Health Protection Agency](#)

## Indoor Air

- U.S. Environmental Protection Agency, [Indoor Air Quality](#)
- U.S. Environmental Protection Agency, [An Introduction to Indoor Air Quality \(IAQ\)](#)
- World Health Organisation, [Indoor Air Pollution](#)
- California Environmental Protection Agency, [Air Resources Board Indoor Air Program](#)
- American Lung Association, [Healthy Air at Home](#)
- U.S. National Library of Medicine & National Institutes of Health, Medline Plus, [Indoor Air Pollution](#)
- National Safety AG Database, [Questions about Indoor Air Quality](#)

## Mould

- Centers for Disease Control and Prevention, Environmental Hazards & Health Effects, [Mold](#)
- U.S. Environmental Protection Agency, [Mold](#)
- U.S. National Library of Medicine & National Institutes of Health, Medline Plus, [Molds](#)

## Respiratory Health

- [Breathe California of the Bay Area](#)
- Centers for Disease Control and Prevention, Environmental Hazards & Health Effects, [Air Pollution & Respiratory Health](#)
- American Lung Association, [Health House](#)

## Toxic Air Pollutants

- U.S. Environmental Protection Agency, [Air Toxics](#)
- Department of Health and Human Services, Agency for Toxic Substances & Disease Registry, [Benzene](#)
- Department of Health and Human Services, Agency for Toxic Substances & Disease Registry, [Toluene](#)
- [Hazardous Substance Data Bank](#)

## Volatile Organic Compounds (VOCs)

- Lawrence Berkeley National Laboratory, [Indoor Volatile Organic Compounds \(VOCs\) and Health](#)
- U.S. Environmental Protection Agency, [Indoor Air Quality, Organic Gases \(Volatile Organic Compounds - VOCs\)](#)
- U.S. National Library of Medicine & National Institutes of Health, [Tox Town](#)
- [Household Products Database](#)

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These results are authorized by the Laboratory Director or approved representative.

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This analysis was performed by Prism Analytical Technologies, Inc. (Prism), the developer of Home Air Check. The results contained in this report are dependent upon a number of factors over which Prism has no control, which may include, but are not limited to, the sampling technique utilized, the size or source of sample, the ability of the sampler to collect a proper or suitable sample, the compounds which make up the TVOC, and/or the type of mold(s) present. Therefore, the opinions contained in this report may be invalid and cannot be considered or construed as definitive and neither Prism, nor its agents, officers, directors, employees, or successors shall be liable for any claims, actions, causes of action, costs, loss of service, medical or other expenses or any compensation whatsoever which may now or hereafter occur or accrue based upon the information or opinions contained herein.

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