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| <br>Eoldomasmacht na Seirbhíse Sláinte<br>Health Service Executive | <h1 style="margin: 0;">SAFETY ALERT</h1>   |                      |              |                     |  |
| <b>Ref:</b><br><b>SA:012:01</b>   | <b>RE: Change in Occupational Exposure Limit value (OELv) for Formaldehyde</b>   |                      |              |                     |   |
| <b>Issue date:</b>  | January 2018   | <b>Revised date:</b> | October 2020 | <b>Review date:</b> | October 2022  |
| <b>Author(s):</b>   | National Health and Safety Function – Information & Advisory Team<br><br><i>With acknowledgement to:</i> Ms. Bridget Irvine, Senior Scientist, Histology, Cavan General Hospital.  |                      |              |                     |   |
| <b>Distribution:</b>  | <b>Please ensure that this Safety Alert is brought to the attention of all relevant persons in the workplace.</b>  |                      |              |                     |   |
| <h2 style="margin: 0;">S</h2>   | <p><b>SITUATION:</b></p> <p>Formaldehyde is used in the histology laboratories throughout the HSE for the preservation of samples. Based on clinical requirements different percentages of Formaldehyde are used as appropriate to the task. Formaldehyde diluted to different concentrations is known as Formalin.</p> <p>The Health &amp; Safety Authority’s (HSA) 2016 Code of Practice reduces the current Occupational Exposure Limit values <b>by a factor of 10</b>. In accordance with the Chemical Agents Regulations, monitoring must be undertaken and OELVs must not be exceeded.</p> <p>Formaldehyde has also been re-categorised as a category 1B carcinogen and therefore the Safety, Health &amp; Welfare at Work (Carcinogen) Regulations, 2001 &amp; 2015 also apply.</p>  |                      |              |                     |   |
| <h2 style="margin: 0;">B</h2>   | <p><b>BACKGROUND:</b></p> <p>The HSA’s 2016 Code of Practice for the Chemical Agents Regulations, define an Occupational Exposure Limit Value (OELv) as: <i>“the limit of the time weighted average of the concentration of a chemical agent in the air within the breathing zone of a worker in relation to a specified reference period, as approved by the Authority”</i>.</p> <p>In other words an OELv is the maximum permissible concentration of a chemical agent in the air at the workplace to which workers may be exposed, in relation to an 8 hour or a 15 minute reference period, as set out in the code of practice. OELvs can be found in <b>Section 8</b> of the relevant Safety Data Sheet (SDS) (please note that SDS are usually updated at least two-yearly).</p> <p>The current Occupational Exposure Limit Value (8-hour reference period) and short term (15 minute) OELvs for Formaldehyde are 0.2 ppm and 0.4ppm respectively. In order to establish whether you are complying with these limits, you should consult with a qualified occupational hygienist to determine the most appropriate method for sampling and analysis.</p> |                      |              |                     |   |

**A****ACTIONS:**

The manager should assess how this chemical is used through the following risk assessment process.

Firstly, Managers must determine whether any hazardous chemical agents are present at the workplace and assess any risk to the safety and health of employees arising from the presence of those chemical agents, taking into consideration the following:

- (a) any hazardous properties
- (b) information provided by the supplier of the hazardous chemical agent including information contained in the relevant (SDS) and any additional information as may reasonably be required to complete the assessment
- (c) the level, type and duration of exposure
- (d) the circumstances of work involving such agents and the quantities stored and in use in the workplace
- (e) any OELv or biological limit value contained in an approved code of practice
- (f) the effect of preventative measures taken
- (g) where available, the conclusions from health surveillance already undertaken and
- (h) any activity including maintenance and accidental release in respect of which it is foreseeable that there is a potential for significant exposures

The Safety, Health and Welfare at Work (Chemical Agents) Regulations 2001, state that where the results of risk assessment reveal a risk to employee health and safety, specific protection and prevention measures are required. This includes measuring hazardous chemical agents (occupational hygiene monitoring) in accordance with an internationally validated procedure for comparison with the applicable OELv. Occupational Hygiene Monitoring may consist of personal and/or area (static) sampling as deemed appropriate by an Occupational Hygienist.

**R****RECOMMENDATIONS:**

The hierarchy of controls must be considered by the manager in the context of the Regulations as follows:

- **Figure 1. Hierarchy of Control for Chemical Agents** (as per the Safety, Health & Welfare at Work (Chemical Agents) Regulations, 2001)



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|                           | <p>Specific Recommendations for Line Managers</p> <ul style="list-style-type: none"> <li>• Ensure that a comprehensive risk assessment of the processes and activities involving the use of formaldehyde and identified controls is completed and kept under review</li> <li>• Review usage periodically with a view to avoiding use or replacing the agent with a non or less harmful substitute</li> <li>• Design and organise safe systems of work - implement suitable working procedures, including arrangements for the safe handling, storage and transport within the workplace of hazardous chemical agents and wastes</li> <li>• Reduce to a minimum the number of employees exposed or likely to be exposed and reduce to a minimum the duration and intensity of exposure</li> <li>• Ensure that the extraction systems, specimen storage cabinets, heating, ventilation and air conditioning systems (HVAC) are on a preventative maintenance/validation schedule and that records are maintained locally</li> <li>• Ensure there is a procedure in place to assess the competence of all personnel/contractors who carry out preventative maintenance</li> <li>• Ensure that occupational hygiene monitoring is carried out. For further details please refer to SAGN on <a href="#">Occupational Hygiene monitoring</a> in the Workplace (ref: 009:02)</li> <li>• Where there is an element of residual risk, despite the implementation of necessary controls, as a last resort issue suitable Personal Protective Equipment (PPE) and Respiratory Protective Equipment (RPE) as appropriate</li> <li>• The Safety, Health &amp; Welfare at Work Carcinogen Regulations, 2001, require the employer to provide health surveillance to their employees when the risk assessment reveals a risk to their health and safety</li> <li>• Finally, ensure that employees are provided with adequate information on the risks and any necessary controls as per risk assessment.</li> </ul> |
| <p><b>References:</b></p> | <ul style="list-style-type: none"> <li>• Safety, Health &amp; Welfare at Work (Chemical Agents) Regulations, 2001</li> <li>• 2016 Code of Practice for the Chemical Agents Regulations</li> <li>• Guidelines to the Safety, Health and Welfare at Work (Chemical Agents) Regulations, 2001 &amp; 2015</li> <li>• Safety, Health &amp; Welfare at Work (Carcinogens ) Regulations, 2001</li> <li>• <a href="#">NHSF SAGN on Occupational Hygiene Monitoring</a></li> <li>• <a href="#">NHSF Chemical Agents Risk Assessment Form</a></li> </ul>   |