

**Proposal of tests for preparing SIP for:**

**Melamine/ C<sub>3</sub>H<sub>6</sub>N<sub>6</sub> / CAS #: 108-78-1**

Number	REACH Requirements	Analytical Method	Results and Comments
1.	<p><b>Sameness</b></p> <p>Comparison tested samples to well known standard</p>	<p>IR</p> <p>Infrared Spectroscopy</p>	<p>ATR-IR spectra of solid melamine</p> <p>Comparison of characteristic peaks with a library (Wiley)</p> <p>See for an example:  <a href="http://webbook.nist.gov/cgi/book.cgi?ID=108-78-1&amp;Units=SI">http://webbook.nist.gov/cgi/book.cgi?ID=108-78-1&amp;Units=SI</a></p>
<p><b>Clarification why Analytical techniques are not used.</b></p>			
NMR	<p>By using NMR to characterize melamine a choice has to be made for solid or liquid state NMR. Solid state NMR is an expensive method and required equipment is scarce. By choosing liquid state NMR the choice of the dissolving medium is critical op for the final outcome.</p>		
UV	<p>Due to the fact that for both liquid and solid state NMR no standard test protocols and reference spectra are available for melamine this test method is not used.</p>		
MS	<p>The reason not to use UV for characterization purpose is largely due to the fact that UV absorption spectrum is not unique enough (in contrast to IR) to give an unambiguous fingerprint of a chemical species.</p> <p>Mass Spectrometry would not give any further clarification to the substance, since it has to be performed after IR.</p>		
4	<p><b>Impurities and secondary component</b></p>	<p>HPLC- hydrolyzed impurities</p> <p>High Performance Liquid Chromatografie, determination of ARC</p>	<p>Ammeline, Ammelide and Cyanuric acid.</p> <p>Method DSM SCM 108</p> <p>Method available on request with mentioning REACH via:  <a href="mailto:peter.notermans@dsm.com">peter.notermans@dsm.com</a></p>
5		<p>Inorganic impurities:</p> <p>Burn the melamine and determine the remainings (gravimetric)</p>	<p>Ash</p> <p>Method DSM SCM 001</p> <p>Method available on request with mentioning REACH via:  <a href="mailto:peter.notermans@dsm.com">peter.notermans@dsm.com</a></p>
6		<p>Water:</p> <p>Extraction and titration by Karl Fisher</p>	<p>Water</p> <p>Method DSM SCM 174</p> <p>Method available on request with mentioning REACH via:  <a href="mailto:peter.notermans@dsm.com">peter.notermans@dsm.com</a></p>