

**Biomakespace COSHH Assessment – Transformation of Yeast**

Important: Please complete this after reading the [BMS15 Chemical Safety Policy](https://docs.google.com/document/d/1jqt7U67YcpqbM-yku7-O4V3EzZd7p3cp1H4lFuTk4Nk/edit#heading=h.pdre7kyhkn2a) and any other [relevant safety policies](https://drive.google.com/drive/folders/0B9V3tIqIu0UZdFRIdzBOWDE5OFk).

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| **Chemical**  *Or biological agent* | **Chemical risk and hazard categories (R-phrases) Hazard and Work Place Exposure Limits (WEL)** |
| YPD media (broth)   YPD plates (agar)   Kanamycin Solution (in broth or plates)   Minimal Yeast Media, supplemented with sugars and to exclude 1 nutrient (e.g. Ura-) (agar)   50 % PEG-4000   1 M / 0.1 M LiOAc   Salmon Sperm DNA (10 mg/mL)   pWS2081 DNA   gWS153 DNA   BbsI restriction enzyme (NEB)   Restriction enzyme buffer (from manufacturer - NEB buffer 2.1)   70% ethanol (required to sterilise Class II microbiological safety cabinet, if used.) | None  None   H360 – may damage to fertility or unborn child  R61 – may cause harm to unborn child  None    None   None   None   None   None   None   None    H225 Highly flammable liquid and vapour. H319 Causes serious eye irritation EH40 WEL 1,000 ppm 1,920 mg/m3 (for 100%; this is mitigated in 70%) |
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| **Control Measures** [*Fume Cupboard, glove box, safety cabinet, local exhaust ventilation*]  No requirement for specific control measures, use in well-ventilated space with standard PPE. | |
| **Flammables and explosives**  *Is there a substance used or formed that might give rise to a fire or explosion?* **Yes**  *70% ethanol used to clean sterile hood. Store in flammables cabinet when not in use, expose to no spark / open flame risks, and use small diluted quantities.* | |
| **Personal Protective Equipment** [*Lab coat/overalls, gloves, eye/hearing/respiratory protection*]  Use of lab coat, gloves and safety glasses while handling chemicals and biological material. | |
| **Monitoring** [*Chemical, gas, oxygen depletion etc.*]  None | |
| **Health surveillance required** [*E.g. Carcinogen, mutagen, toxic to reproduction, sensitizer*]  None | |
| **Storage**  Reagents are stored in a dry, cool and well-ventilated area  YPD agar plates should be kept at 4c  Biological components/buffers should be kept at -20c  Yeast growth cultures will be kept at 30’C when not in use  Final yeast plates will be grown for 2 days at 30’C and subsequently stored at 4’C. | |
| **Waste disposal** [*Contractor, chlorinated, non-chlorinated, non-hazardous aqueous, general waste*]  Used/unused YPD agar plates should be autoclaved and disposed of as standard waste | |
| **Emergency Procedure**  Follow emergency procedures as per BMS08 - Accident at Work Emergency Plan.  In the event of a fire, supply emergency services with chemicals register as necessary.  For small spillages, clean up with tissues and general surface cleaner, dispose of the tissues as contaminated waste. For larger spillages use spill kit and dispose of pads as contaminated waste | |
| **First Aid**  Inhalation: remove to fresh air. Seek medical advice. If not breathing, give CPR. Do not use mouth-to-mouth method if victim ingested or inhaled the substance  Skin: wash thoroughly. If irritation occurs seek medical advice  Eyes: flush with plenty of soap and water, and seek medical advice.  Ingestion: Rinse mouth with water and seek medical attention immediately | |
| **Out of hours/lone working (any specific risks)**  No significant risks – Transformation is allowable out of hours and when lone working for individuals approved by the Safety Officer. | |

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| **Assessment Summary** |