

## **MATERIAL SAFETY DATA SHEET FOR GCGR FROZEN CELL CULTURES**

**Product name:** Human Glioma Stem Cell (GSC) lines supplied by the Glioma Cellular Genetics Resource.

**Established by:**

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**Appearance:** Frozen fluid in small plastic containers (vials).  
Solid/liquid/gas: Solid (frozen state).

The product is provided as a frozen culture of human cells. Yellow or pink solid for frozen cultures. Aqueous pH 6-8. The frozen components may include but are not limited to: water, inorganic salts, vitamins, amino acids, carbohydrates, lipids, proteins (animal-derived) and cryoprotectant (dimethyl sulphoxide 10% v/v), phenol red.

**Chemical Hazards:** Frozen cultures contain 10% (v/v) dimethyl sulphoxide (DMSO). DMSO may be harmful and toxic if in contact with skin or ingested and may also irritate eyes and respiratory system. Thawed contents of vials should not come into contact with skin, eyes or digestive and respiratory epithelium and should be diluted upon use with culture media. Persons handling vials of frozen cells containing DMSO should wear a laboratory overall, protective glasses (if not using a safety hood) and gloves.

**Biological hazards:** Glioma patients were not screened prior to surgery, however the samples are from low-risk individuals. Most adventitious agents only present a risk in the human cell cultures prior to their first sub-culture. All GCGR cell lines have been sub-cultured multiple times. Selected GSC lines have been screened for HIV, Hep B, Hep C. All were negative. Although a human cell line may not be known to contain any agents capable of harm to healthy adult humans the possibility of a contaminant, adventitious virus can rarely be excluded. Therefore, it is recommended that all human cell lines are handled as Containment level 2 ([hse.gov.uk](http://hse.gov.uk)).

**Health Effects:** Eyes: Not known; Skin: Not known; Ingestion: Not known; Inhalation: Not known

**Physical Hazards:** Where cell lines are shipped as frozen vials there is a small risk that the vial may be pressurised, due to the expansion of trapped liquid nitrogen and could explode on warming. It is recommended that persons handling vials of frozen cells should wear a laboratory overall, protective glasses (if not using a safety hood) and protective laboratory gloves. This sheet does not constitute an assessment as required by the Control of Substances Hazardous to Health Regulations 1994. The information contained in this publication is given in good faith and is accurate to the best of our knowledge.

**First aid measures:** If accidental contact with material occurs laboratory staff must follow the local first aid procedures that are normally applied following exposure to organisms of containment level 2 ([hse.gov.uk](http://hse.gov.uk)). Eyes: Irrigate with physiological saline or water. Seek medical advice immediately. Skin: Wash thoroughly with soap and water. Seek medical advice immediately. Ingestion: Seek medical advice immediately. Inhalation: Seek medical advice immediately.

**Accidental release measures:** avoid direct contact with the thawed material. Do not open the primary containers unless authorised to do so. Wear a laboratory overall, protective laboratory gloves and safety glasses (if not using a safety hood). If spillage occurs wear a laboratory coat, protective laboratory gloves and protective glasses (if not in hood), place absorbent material over the spillage. Pour

disinfectant over spillage to saturate and leave for 30 minutes prior to cleaning and disposal. The preferred disinfectant is 10% v/v sodium hypochlorite (10,000 parts per million available chlorine). This should not be used in combination with other disinfectants, see your local risk assessment or contact the manufacturer of the disinfectant for additional information.

**Handling and storage:** Personal protective equipment comprised of laboratory coat, protective laboratory gloves and safety glasses should be worn when handling (unpacking) human and animal cell lines. The dry ice (solid carbon dioxide) used to ship frozen vials should be allowed to evaporate in a well-ventilated area. Do not dispose of dry ice in a sealed container. Vials or flasks containing human and animal cells should be opened in a Class II microbiological safety cabinet under conditions of containment level 2.

**Exposure controls/Personal protection:** Vials containing human and animal cells should be opened in a Class II microbiological safety cabinet under conditions of containment level 2. Personal protective equipment comprised of laboratory coat and protective laboratory gloves should be worn.

Avoid aerosol production and inhalation. Handle as for containment level 2.

**Stability and reactivity:** Stable. Hazardous polymerization will not occur.

**Toxicological information:** In its thawed liquid state this material is not normally toxic but avoid aerosol formation and inhalation. Vials contain dimethyl sulphoxide 10% v/v which is an irritant that readily penetrates the skin.

**Disposal considerations:** Follow established procedures for Containment Level 2. Follow all national, regional and local regulations.

**Methods for disposal for thawed contents:**

**Spillage:** wear a laboratory coat, safety glasses and protective laboratory gloves. Place paper towels or other absorbent material over the spillage. Pour disinfectant over spillage to saturate and leave for 30 minutes prior to cleaning and disposal. The most appropriate disinfectant is 10% v/v Sodium hypochlorite (10,000 parts per million available chlorine). This should not be used in combination with other disinfectants. See your local risk assessment or contact the manufacturer of the disinfectant for additional information.

**Waste disposal:** Decontaminate prior to disposal with a 10% sodium hypochlorite solution and dispose of decontaminated liquid waste down a designated sink with running water. Solid waste should be placed in a sealed bag and labelled and destroyed by incineration.

**Transport information:** GCGR cell lines are not classified as dangerous goods as they are considered non-infectious and non-hazardous to humans or animals.

The following categories apply and GCGR will ensure the outer packaging indicates the appropriate packaging requirements:

UN no: 1845- Dry Ice. Dry ice not deemed dangerous by road transport only air.

Biological Substance Category B UN3373 – packed in compliance with IATA packing instruction 650.

**Other information:** The above information is correct to the best of our knowledge. All materials and mixtures may present unknown hazards and should be used with caution.

The user should make independent assessments and decisions regarding the completeness of the information based on all sources available.

**As per MTA, the GCGR (University of Edinburgh, UCL and Cancer Research UK) shall not be held liable for any damage resulting from handling or contact with the above product.**