



Standard operating procedure: GeoMx – NGS Slide preparation for FFPE tissue

Health and Safety hazards and control measures

- Hazardous chemical - Xylene

Xylene is a Flammable. Irritating to the skin, eyes, mucous membranes, and respiratory tract. A carcinogen that may damage the liver and kidneys through prolonged/repeated exposure. Acute toxicity. Wear either nitrile gloves or xylene resistant gloves. Always use in a chemical fume hood. Do not wash into drains, dispose via chemical waste route. Store in fume cabinet separate to flammable solvents. Note: if nitrile gloves are used, use forceps to minimise exposure to xylene.

- Hazardous chemical - Ethanol

Ethanol is a highly flammable liquid and vapour. It causes serious eye irritation. Wear nitrile gloves. Low risk of eye splash as ethanol steps are performed in a fume hood. Avoid use near flames, heat or sparks.

- Hazardous chemical – 10% Neutral buffered formalin (NBF)

Neutral buffered formalin is a combustible liquid and is a health hazard. It is suspected of causing genetic defect, may cause cancer and may cause damage to organs. It may also cause an allergic skin reaction. Wear nitrile gloves. Keep away from flames and hot surfaces. Store in fume cabinet. Do not wash into drains, dispose via chemical waste route.

- Hazardous chemical – 100% deionized formamide

100% Deionized formamide may damage fertility or the unborn child if swallowed, it is suspected of causing cancer if swallowed and may cause damage to organs through prolonged or repeated exposure. Wear nitrile gloves and use in a fume hood. Do not wash into drains, dispose via chemical waste route.

- Hazardous chemical – Proteinase K

Proteinase K may cause allergy or asthma symptoms or breathing difficulties if inhaled. Desiccate Proteinase K should be used in fume hood and proteinase K in solution can be used in well ventilated areas. Do not wash into drains, dispose via chemical waste route.

- Hazardous Chemical – Buffer R

Buffer R is suspected of causing cancer, may damage fertility or the unborn child and may cause damage to organs through prolonged or repeated exposure. Wear nitrile gloves and use in a well-ventilated area. Do not wash into drains, dispose via chemical waste route.

- Hazardous Chemical – Buffer H and buffer S

Buffer H and buffer S may cause an allergic skin reaction. Wear Nitrile gloves and avoid breathing in vapour.



- **Steamer** – Hot steam may cause burns. Heat may cause glass containers to break. Staff/students are trained in the safe use of the steamer. Only use plastic containers in the steamer.

Protocol

See: MAN-10150-02_GeoMx_DSP_Manual_Slide_Prep_User_Manual ([GeoMx DSP Manual Slide Preparation User Manual \(nanosttring.com\)](#)) Starting at Page 27.

Tissue disposal:

Once tissue sections have been used, dispose of in yellow wiva bin labelled “HTA waste” for incineration.

Accidental exposure/ first aid:

First Aid treatment for skin contact with xylene, ethanol, 10% neutral buffered formalin and deionized formamide:

Remove any contaminated clothing. Rinse skin well with water for a prolonged period. If necessary, seek medical attention.

First Aid treatment for inhalation:

Remove person to a well-ventilated area. If person seems to become dizzy or loses consciousness call security and wait for emergency services to arrive.

First Aid treatment for eye splash:

Rinse thoroughly for at least 15min using the eye wash station. If necessary, seek medical attention.

First Aid treatment for ingestion:

Do NOT induce vomiting. Rinse mouth with water and seek medical attention immediately.

First Aid treatment for scalds:

Flush the burn with lots of cool water for 20min. Seek medical attention if the patient has anything more than a small minor burn.

Emergency support through security: 4444 (+442075891000)

In all instances of accident OR near miss, notify the safety department and complete a SALUS report.

<https://www.imperial.ac.uk/safety/safety-by-topic/accidents--incidents/>

Occupational health contacts: <https://www.imperial.ac.uk/occupational-health/>

email: occhealth@imperial.ac.uk phone: +44 20 7594 9401

Date	Name	Signature	Trained by	Supervisor/Lab Manager

