GEORG-AUGUST-UNIVERSITÄT GÖTTINGEN

Experiment Safety Form

ScienceMe! Science Show Competition

11.-13.06.2017, IdeenExpo, Hannover, Germany

Please describe below all the experiments you intend to present (up to 6 experiments), even if you think they have no safety issues.

Then, please sign and send this form UNTIL MARCH 24 to scienceme@unige.ch for approval by the Ideen Expo Safety Officers. You'll be contacted within a few weeks to be informed if your experiments can be presented as described or if they need modifications related to safety.

Details of show

Name of the show	Zauberhafte Physik
Institution	University of Göttingen
Address	Friedrich-Hund-Platz 1
Address	37077 Göttingen
Address	
Country	Germany

Names of participants including date of birth

Johannes Hinrichs; dd.mm.yyyy
Sebastian Skorzinski; dd.mm.yyyy

Contact information

E-Mail	Jhinric1@gwdg.de
Telephone	
Telephone (Mobile)	015122779663
Other	

With your signature, you confirm, that you give all details of your experiments in the following sheets. If some experiments don't fit to the safety regulations, you will have to choose other ones. We will inform you in that case. You aren't allowed to show or perform other experiments than the ones which received formal approval by Safety Officers.

_____

Date, Signature

Name of experiment #1

Fire Tornados

Description of experiment

A flame is ignited inside a rotating cylinder in order to produce a large columns of fire.

Materials used

Isopropanol

Hazards involved

- ☒ Fire
- ☐ Liquid Nitrogen
- ☐ Gases
- ☒ Chemicals
- ☐ Noise
- ☐ Radiation
- ☐ Lasers
- ☐ Other

Description of hazards

The experiment creates a large flame (2m height). The isopropanol (burnable substance) might be spilled.

What measures are taken to avoid hazards

The experiment has to be conducted on an appropriate ground, which ensures that the experiment does not slip or fall over. A high ceiling (>4m) is required. Fire alarms must be switched off. Gloves and goggles must be worn while handling chemicals.

Comments/Pictures/Videolinks

None.

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Details of show

Name of the show	Chimiscope
Institution	University of Geneva
Address	Ernest-Ansermet 30
Address	1211 Geneva 4
Address	
Country	Switzerland

Names of participants including date of birth

Bérénice Moynier; dd.mm.yyyy
Didier Perret; dd.mm.yyyy

Contact information

E-Mail	didier.perret@unige.ch
Telephone	
Telephone (Mobile)	0041-79-2244857
Other	

With your signature, you confirm, that you give all details of your experiments in the following sheets. If some experiments don't fit to the safety regulations, you will have to choose other ones. We will inform you in that case. You aren't allowed to show or perform other experiments than the ones which received formal approval by Safety Officers.

_____

Date, Signature

Name of experiment #1

Fluorescence of substances

Description of experiment

Different substances are illuminated with Ultraviolet light to produce a “glow in the dark effect”.

Materials used

UV-lamp
Blue laser
Fluoresceine

Hazards involved

- ☐ Fire
- ☐ Liquid Nitrogen
- ☐ Gases
- ☒ Chemicals
- ☐ Noise
- ☒ Radiation
- ☒ Lasers
- ☐ Other

Description of hazards

The UV-lamp and blue Laser emit dangerous radiation. Fluoresceine is a chemical substance not intended for human consumption.

What measures are taken to avoid hazards

The UV-lamp is shielded so that it does not emit radiation towards the audience. The Laser (Class 2) is installed in fixed mount and only activated when properly in place. The experimenters wear appropriate eye protection. Fluoresceine is only used in small quantities so that no toxic effects have to be expected.

Comments/Pictures/Videolinks

None.

Name of experiment #2

Colour-changing cocktails

Description of experiment

Aqueous solutions of acid-base indicators are reacted with dry ice to change their colours.

Materials used

Acid-base indicators (phenolphtaleine, bromothymol blue, methyl red, cresol red)
Dry ice

Hazards involved

- ☐ Fire
- ☐ Liquid Nitrogen
- ☐ Gases
- ☒ Chemicals
- ☐ Noise
- ☐ Radiation
- ☐ Lasers
- ☒ Other Dry ice

Description of hazards

The temperature of dry ice is -79°C and may cause burns if in contact with skin.

What measures are taken to avoid hazards

Acid-base indicators are only used in negligible concentration and are not harmful. Small quantities of dry ice are used by professional animators wearing appropriate protection (eye, body, hands), far from the public, without risk of spillage.

Comments/Pictures/Videolinks

None.