



## Safe Use of Heat Guns

### 1. Introduction

Heat guns are commonly used in research laboratories as a convenient heat source, however, the hazards associated with their use can be easily overlooked. Notes on the key hazards and best practice when using a heat gun are summarised below.

### 2. Hazards

- The heating element in a heat gun can become extremely hot (>250 °C) when in use. Despite the absence of a naked flame, the heating element can serve as an effective ignition source and ignite flammable material such as organic solvents.
- Exposure to (i) the hot air leaving a heat gun or (ii) direct contact with the outlet nozzle could result in severe burns.

### 3. Best Practice

- Remove all flammable material from the immediate vicinity when using a heat gun.
- Heat guns should not be used for the routine heating of reaction mixtures (i.e. stirrer hotplates should be used as an alternative).
- When using a heat gun to aid the distillation of high boiling point materials, take care to avoid heating the apparatus excessively as this may result in a build-up of pressure within the distillation apparatus.
- When using a heat gun to develop TLC plates, hold the plate with tweezers to avoid burns to hands.
- Always maintain a minimum of 1 cm clearance between the outlet nozzle and item being heated.
- Never leave a heat gun unattended when switched on.
- Always place a heat gun onto a heat-resistant surface or into a suitable holder after use.