

## Risk Assessment Form

<b>Procedure</b>	Use of Ohaus Pioneer Fine and analytical A&D Balance
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<b>Name(s) of person performing the work</b>	Users (Lab manager & Lab Technician & Tenants & Licensee's)		
<b>Name &amp; position of assessor</b>	Khwaja Islam & Laboratory Manager	<b>Signature</b>	
<b>Date of assessment</b>	06/09/2018	<b>RA Number</b>	BioE 0026

### **Outline of procedure / activity:**

The Pioneer Balances are located in the chemistry lab (696.10.23) and is used routine weighing of chemicals. Specification: capacity 220g and readability is 0.1mg, pan diameter 90mm and square draught shield with three removable sliding doors, easy to remove doors and panels for periodic cleaning which avoid sample contamination and extend product life.

The analytical A&D balance is located in the chemistry lab (696.10.23) and is used for routine weighing of chemicals. Specification: capacity 22g and readability is 0.001mg, small weighing pan, micro tube holder, large and small weighing pan for filter, slide breeze break, small fine range ring, and fine range ring and dust plate.

Operator must be trained in using the balance to guarantee safe daily use. Untrained Personnel are not be allowed to operate the heating magnetic stirrer. Users should operate the balance according to instructions in the manual. User must always ensure that power cable is in good condition, no wires exposed.

#### Operation of pioneer fine balances:

1. Connect the unit to mains.
2. Level the balance on firm, steady surface. Avoid locations with excessive air current, vibrations, heat sources or rapid temperature changes.
3. Count, APW optimization, percentage or specific units of measure must be activated in the mode OR unit if they are not initially available.
4. Weighing mode – repeatedly press unit until the desired unit icon is displayed.
5. Press 0/T to zero the balance and then place objects to be weighed on the pan.

#### Operation of A&D analytical balance:

1. Turn on the balance using the ON: OFF key.
2. Select a present unit using the MODE key, if necessary.
3. Press the tare (container) on the weighing pan, if necessary.  
Press the RE-ZERO key to cancel the tare weight.  
Then Zero is displayed.  
Tare: A vessel placed on the pan, but not to be included in the weighing data. Example: Container.

4. Place a sample on the in the weighing boat, close the door.
5. Wait for the stabilization indicator 0 to be displaced, then read the value.
6. Remove the sample and weighing boat from the pan.

#### Maintenance:

- No routine or extraordinary maintenance is necessary apart from periodically cleaning the unit.
- Clean the balance with a lint free cloth that is moistened with warm water and a mid-detergent.
- Do not use organic solvents to clean the balance.

#### Precautions:

- Use the balance only in dry locations.
- Do not operate the balance in hostile environments.
- Do not drop loads on the platform.
- Do not place the balance upside down on the platform or platform mounting cone.
- The best operating temperature is about 20°C and 50% relative humidity.
- Room must be free of dust.
- Weighing table should be solid and free from vibrations, draft (such as frequently opening doors) and as level as possible.
- Do not install the balance where it will be subject to vibration. Corners of rooms are best.
- Do not install the balance near heater, ac, or in a breeze.
- Do not install the balance in direct sunlight and excessive temperature changes.
- Do not install the balance near other equipment which produces magnetic fields.
- Adjust the level of the balance using the level feet.
- Please warm-up the balance for at least one hour.
- Calibrate the balance before using and after moving it to another location.
- Do not place or use the balance where there is flammable or corrosive gas present.
- Do not drop things upon the weighing pan, or place a weight beyond the range of the balance on the weighing pan.
- Make each weighing gently and quickly to avoid errors due to changes in the environmental conditions.
- Small fine range ring, fine range ring and separation plate are used to avoid weighing error caused by drafts (0.01 and 0.001mg).
- Do not use a sharp instrument (such as a pencil or ball point pen) to press the keys, use your finger only.
- Press the RE-ZERO key before each weighing to prevent possible errors.
- Avoid foreign matter (dust, liquid or metal fragments) that could get inside the balance.
- Operate your balance gently. Shorten the operation time as much as possible (opening and closing the door, putting and removing sample). Use tweezers to avoid temperature changes due to heat from inserting your hand into the weighing chamber.

### Potential hazards

Substance or item handled	Associated Hazard (s)	Existing Control Measures	Risk (L/M/H)	Further Action required	Risk (L/M/H)
Use of Balance	Electrical hazard - Electrical shock – danger of death.	Only switch on the device if the device and power cable are undamaged. Only trained personal are allowed to use the machine. Balance are earthed, protective earth connection for the machine is provided using 13A plug fitted to the machine (RCD protected). Make sure it has been PAT tested. Regular visual checks of power cords for fault, fraying or wear and regular electrical safety check. Any faults reported and repaired before use.	L	No further action required if the existing control measures are adhere to.	L
Use of Chemicals	Many chemicals we use are hazardous and it is at the point of weighing that they present the greatest	Must wear appropriate PPE according to RA and COSHH assessments. Follow GLP. Spillage to be clean up immediately! The substance may be non-hazardous but third parties will not know this. Do not tip chemicals out; always use a spatula. Scoop up reasonable amounts from the bottle, holding it as close as possible to the balance pan. Do not	L	No further action required if the existing control measures are adhere to.	L



	danger.	return unused chemical to the stock bottle. Always recap chemical bottles immediately after use to reduce spillage if the bottle is tipped over.			
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**Persons potentially at risk:**

Only the user or others near by

**Action in event of an accident or emergency:**

1. **Fire:** raise the fire alarm and evacuate the area.
2. Spill kit available for large spillage.

**Arrangements for monitoring effectiveness of control:**

Daily inspection of equipment by lab technician.

Instruction and training given to all operators which is reviewed annually.

Existing operators receive annual refresher training.

Annual pat testing by external contractor.

Annual service maintenance by external contractor.

**Arrangements for monitoring effectiveness of control:****Review of the Risk Assessment:**

Date of review		Name of reviewer	
Date of next review		Signature	

Have the control measures been effective in controlling the risk?

Yes	No
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Have there been any changes in the procedure or in the information available which affect the estimated level of risk from the listed substances

Yes	No
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What changes to the control measures are required?

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**Declaration by Tenants/Licensees/Technicians:**

I confirm that I have read this Risk Assessment and that I understand the hazards and risks involved and will follow all of the safety procedures stated. Where PPE has been identified as a control measure, I will ensure that it is worn.

**Declaration by Laboratory Manager (LM):**

I confirm that the tenants/licensee/technician who has signed below is competent to undertake the work. My counter-signature indicates that I am happy for the work to proceed.

Name (Please print)	Signature	LM Countersignature	Date



Name (Please print)	Signature	LM Countersignature	Date