Document Number: **SASoM/EQUIP/029.v2**

Title: **Use and Maintenance of the Biohit BP800 Microplate Reader**

Version: **v2**

Author: **Peter Mullen**

Effective from:	01/01/2018
Valid to:	31/12/2022

SOP History		
Number	Date	Reason for Change
v1	01/01/2013	Original
V2	01/01/2018	Update

1.0 Purpose –

The purpose of this SOP is to outline the principles of the routine use and maintenance of the Biohit BP800 Microplate Reader in Laboratory 248 at the St Andrews School of Medicine (SASoM) and to reference any standard protocols for the use of this equipment.

2.0 Scope –

This SOP applies to routine use and maintenance of the Biohit BP800 Microplate Reader within the SASoM.

3.0 Responsibilities –

It is the responsibility of all users of the Biohit BP800 Microplate Reader within the SASoM to comply with this SOP.

4.0 Procedure –

Principles of Operation:

The Biohit BP800 Microplate reader is a semi-automated bench-top spectrophotometer capable of reading 24-, 48- and 96-well trays using five pre-defined set-wavelength filters.

Operation:

Switch on the plate reader using the rocker switch on the right hand side of the instrument (towards the rear).

Allow the plate reader to complete its 'System Self Test'.

Log onto adjacent PC and Launch e-Elisa XL software from the desktop.

Load a plate into the carrier, retaining it with the spring-loaded clip at the front right hand corner. Remove the lid of the plate before continuing.

Click on the **'Filter**' icon at the lower left hand corner of the dialogue box. From the drop-down menu, select which filter(s) are to be used. If only one filter is to be used, select 'none' from the 'Secondary' filter box. Select 'Com Port' = 1. Select 'Plate' format from the list, eg. 96-well (8x12). Confirm with 'OK'.

Select '**Click to read plate**'' icon at the upper left hand corner of the dialogue box. Wait until (i) the plate has been read and the carrier returns to its resting position before continuing.

Select the '**Click to transfer data to Excel**' icon at the upper right hand corner of the dialogue box. Navigate to a suitable Excel Template file (eg. P:\Systems Project\EXCELL TEMPLATES\BCA Protein Assay Template). Import data and save as another name to prevent overwriting the original template.

Remove plate from the carrier and discard as appropriate.

Turn off both the plate reader and the computer. Complete the logbook and replace the plastic cover over the machine.

<u>Points to Note:</u>
Any filters specified within any given protocol must be correctly installed and defined using the 'Setup' screens.

Pre-defined protocols can be set up and saved according to the instruction manual. Such protocols can be given both a number and a name for future reference.

A series of 'beeps' may indicate that filters have been selected within a protocol but which are not currently installed on the machine. In order to avoid damage to filters as well as the machine, filters must only be changed / removed by the individual responsible for the instrument (Peter Mullen).

5.0 Personnel protection –
Howie coat must be worn at all times.

Gloves as specified in the appropriate COSHH RA

6.0 Spillages –
Always clean up any spills immediately after use.

Only you know what you have spilt and are aware of that chemicals hazard.

Mop up spills with paper towels. Wash the site of spillage with water & detergent.

7.0 General maintenance –
The instrument should be left in a clean condition at all times.

The instrument should be switched off after use to preserve the life of the bulb.

The plastic cover should also be replaced after use to prevent dust getting into the optics.

8.0 Maintenance –
Filters should only be changed by the individual responsible for the instrument.

9.0 Training –
All users have to be trained before using the Instrument by a designated person.

10.0 Related documents –

10.1 Equipment manual

10.2 Equipment Maintenance Log

10.3 Equipment Maintenance Information sheet

10.4 Risk assessments – RA/GEN/019

10.5 SASoM/EQUIP/039
Programming the Biohit BP800 Microplate Reader

11.0 Approval and sign off –

Author:		
Name:	Peter Mullen	
Position:	Research Assistant	
Signature:		Date:
Management Approval:		
Name:	Mary Wilson	
Position:	Laboratory Manager	
Signature:		Date:
QA release by:		
Name:	Alex MacLellan	
Position:	QA Manager	
Signature:		Date: