5.2.1 The analyst must set up and operate the instrument:

5.2.1.1 Setup and operation of the HPLC instrument must follow appropriate SOP

5.2.1.2 Setup and operation of the UV-VIS Spectrophotometer must follow appropriate SOP

5.2.1.3 Setup and operation of any other instruments must follow the relevant SOP(s).

5.3 Guidelines for SST, Test Sequence and Standard Bracketing

In order to show that the system is operating in a stable condition, the analyst conducting the HPLC and UV-VIS Spectrophotometer Analyses must follow the guidelines for SST, test sequence and standard bracketing as detailed in the following sections.

The system suitability criteria outlined in this document and in the relevant test method must be met before sample injections are allowed to be run. This is required to avoid LIR's (Laboratory Investigation Reports) because of failed system suitability results.

The analyst needs to consult the relevant Manager in cases where the system suitability injections cannot be finished and checked prior to leaving for the day.

5.3.1 HPLC SST Guidelines

5.3.1.1 HPLC system must be setup under the conditions specified in the analytical method.

Minor adjustments may be required in order for a system to pass system suitability requirements. However, allowable adjustments are only those that have been documented in the test method validation (i.e. robustness parameters).

For methods that don't have robustness included, the following can be followed.

Adjustment of the composition of the mobile phase:

The amount of the minor solvent component may be adjusted by ± 30% relative or 2% absolute, whichever is the larger. No component is altered by more than 10% absolute (BP).

Example: 20% Acetonitrile / 80% Buffer Solution ± 30%
relative adjustment of 20% Acetonitrile is ±6%

This is larger than ±2% absolute adjustment and lower than 10% absolute adjustment. Therefore the maximum allowed change for Acetonitrile is ±6%.

5.3.1.2 Test injection(s) of blanks, resolution solutions and working standards can be performed prior to the start of the SST analysis to ensure proper retention time and column equilibration are achieved.

5.3.1.3 HPLC SST must be run prior to injecting samples, or when a significant change occurs. A significant change includes:

- Fresh mobile phase or a new column.
- Turning off any component of the HPLC system.

5.3.4 UV-VIS Analyses Guidelines

5.3.4.1 Unless otherwise specified in the test method the following procedure needs to be followed

5.3.4.2 Test sequence, refer to **Table 4**.

Note: The instrument must be blanked by the diluent or media prior to the UV-VIS analysis.

Table 4:

Solution	Readings	
Working standard	6	% RSD for absorption see table 5
Check standard	1	% Ratio see to table 6
Working standard	2	
Samples (up to 12)	1	% RSD see table 5
Working standard	2	
Samples (up to 12)	1	% RSD see table 5
Working standard	2	

Continue reading samples to completion ensuring all samples are bracketed by 4 working standard readings. Ensure there are no more than 12 sample readings between bracketing standards.

5.3.4.3 The analyst conducting UV-VIS spectrophotometer analyses must conduct SST prior to an UV–VIS analysis.

5.3.4.4 Samples must be read singly and must be bracketed by 4 working standard readings.

5.3.4.5 The average absorbance response of the 4 bracketing standards will be used to calculate the sample results.

5.3.4.6 The criteria in **Table 5** must be met for the %RSD of the absorbance response for the 6 replicates of the Working Standard:

Table 5

Test	Acceptance Criteria (%RSD)
Assay / CU / Dissolution	≤ 2.0%

5.3.4.6 The criteria in **Table 5** must be met for the %RSD of the absorbance response for the 6 replicates of the Working Standard:

Table 6

Test	% Difference	Acceptance Criteria (% Ratio)
Assay / CU / Dissolution	≤ 2.0%	98.0 – 102.0

