



QUALITY DOCUMENTS

W.I. NUMBER 02

STANDARD PRACTICE FOR
CONTROL CHECKS OF
TRANSMISSION DENSITOMETERS



This document forms an integral part of the Company Quality system, and adherence to the requirements specified within are mandatory upon all Company personnel and upon any subcontractor required to work in accordance with it.

This is a controlled document and must not be altered in any way without authorisation from the Company Quality Manager.

Issued by:

Title: Quality Manager

Date: 01.07.15

Authorised / Approved by:

Title: Co-Managing Director

Date: 01.07.15



DOCUMENT AMENDMENTS AND UPDATES

Date Amended	Section Amended	Amendment made	Name of person inserting change
01.07.15	Appendix 3	New Appendix added	S. Young

Changes are hi-lighted

Copies of this document are sent to PCN/BINDT/Lavender Greece

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1.0 SCOPE

- 1.1 This procedure details the method of control checking Transmission Densitometers to be used at Lavender International Test Centre against a reference Density Strip.

2.0 RESPONSIBILITIES

- 2.1 The Quality Manager has the responsibility for the control and amendments made to this Works Instruction in accordance with QP 9 Document Control.
- 2.2 It is the responsibility of Level 3 staff to ensure that persons working to this instruction are suitably trained and certified.

3.0 OBJECTIVES

- 3.1 The main objective is to ensure proper working condition of Densitometers when used at Lavender International.

4.0 APPLICABLE DOCUMENTS

- a. ASTM E 1079 – 10
- b. QP 9 Control of Documents and Records
- c. QP 7 Calibration and Control of Test and measuring Equipment

5.0 EQUIPMENT USED FOR CONTROL CHECKS

- 5.1 Calibrated Transmission Film Density Strip (C.T.F.D strip).
- 5.2 The C.T.F.D Strip shall carry a manufacturer's certificate showing a date of calibration or start date less than five years old.
- 5.3 All C.T.F.D Strips which have been subject to undue wear shall be taken out of use and destroyed.

6.0 STORAGE AND HANDLING

- 6.1 C.T.F.D Strips may be subject to discolouring or fading and must be carefully maintained and stored.
- 6.2 Handling the film by the edges will minimise scratches abrasions and surface stains.



7.0 FREQUENCY OF CONTROL CHECKS

7.1 Densitometers shall be checked every three months.

8.0 TRAINING AND QUALIFICATION

8.1 All personnel who carry out these checks must have attended a training course which shows successful completion.

8.2 Training and certification of the personnel mentioned in 8.1 is to be carried out by a PCN or ASNT Level Three.

8.3 The records of all personnel certified to carry out Transmission Densitometer checks must be retained by administration indefinitely.

9.0 ADMINISTRATION

9.1 It is the responsibility of the Quality Manager to ensure that a suitably qualified operator carries out the control checks and that the log is completed and kept up to date.

10.0 METHOD

10.1 Switch on the Densitometer and allow a 5-minute warm-up period.

10.2 Adjust the zero reading of the Densitometer after the warm-up period.

10.3 Take Density readings for each position on the C.T.F.D Strip and record on form QD 115 Densitcal-Oz for densitometers in Australia (Appendix 1) or QD 116 Densitcal-UK for densitometers in UK (Appendix 2).

10.4 Tabulate Densitometer readings to C.T.F.D Strip.

10.5 Densitometer readings shall not vary by more than 0.05 density units from the density on the C.T.F.D Strip.

10.6 If densities vary more than 0.05 density units the densitometer is out of tolerance and shall be corrected prior to further use. Where necessary this shall be done externally.

**APPENDIX 1****CALIBRATION OF DENSITOMETERS IN AUSTRALIA**

Calibration of Transmission Densitometer-Perth

DENSITOMETER SERIAL NO:**C.T.F.D STRIP USED: 7209086**

C.T.F.D STRIP DENSITY	READING	ERROR	READING	ERROR	READING	ERROR	READING	ERROR
	Date:		Date:		Date:		Date:	
0.151								
0.295								
0.601								
0.903								
1.200								
1.520								
1.800								
2.120								
2.430								
2.730								
3.030								
3.340								
3.650								
3.960								
4.250								



APPENDIX 2

CALIBRATION OF DENSITOMETERS IN UK



Calibration of Transmission Densitometers - UK

SERIAL NO. 49625

C.T.F.D STRIP USED – 140036

C.T.F.D STRIP DENSITY	READING Date:	ERROR	READING Date:	ERROR	READING Date:	ERROR	READING Date:	ERROR
0.17								
0.40								
0.56								
0.88								
1.34								
1.53								
1.71								
1.96								
2.10								
2.52								
3.01								
3.43								
3.88								
4.27								

Ref: Densitcal-UK
QD 116 Issue 1 Date: 08/12/14

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APPENDIX 3

CALIBRATION OF DENSITOMETERS IN GREECE



Calibration of Transmission Densitometer-Greece

DENSITOMETER SERIAL NO:

C.T.F.D STRIP USED: 4404048

C.T.F.D STRIP DENSITY	READING Date:	ERROR	READING Date:	ERROR	READING Date:	ERROR	READING Date:	ERROR
0.15								
0.31								
0.61								
0.93								
1.24								
1.54								
1.85								
2.16								
2.45								
2.76								
3.04								
3.33								
3.62								
3.91								
4.18								