

DIN EN ISO 23783-1:2024-04 (E)

Automated liquid handling systems - Part 1: Vocabulary and general requirements (ISO 23783- 1:2022)

Contents	Page
European foreword	4
Foreword	5
Introduction	6
1 Scope	7
2 Normative references	7
3 Terms and definitions	7
4 Abbreviated terms	15
5 Operation of automated liquid handling systems	16
5.1 Types of automated liquid handling systems	16
5.1.1 General	16
5.1.2 Piston-operated automated liquid handling systems	16
5.1.3 Pump operated automated liquid handling systems	17
5.1.4 Automated liquid handling systems using inkjet-type dispensing technologies	17
5.1.5 Automated liquid handling systems using acoustic droplet ejection technology	17
5.1.6 Pin tools	18
5.2 Types of pipette tips for ALHS	18
5.2.1 General	18
5.2.2 Air-displacement tips	18
5.2.3 Positive displacement tips	18
5.2.4 Fixed tips	19
5.3 Cleaning of re-usable components and confirmation of metrological characteristics	19
6 Testing and calibration of ALHS	19
6.1 Metrological confirmation	19
6.1.1 General	19
6.1.2 Calibration	19
6.1.3 Routine tests	20
6.2 Channels to test	20
6.3 Test volumes	20
6.4 Test liquids	20
6.5 Replicate measurements	20
6.6 Test frequency	20
6.7 Test methods	21
6.8 Exchangeable components	21
6.8.1 Automatically exchangeable components	21
6.8.2 Manually exchangeable components	21
6.8.3 Other exchangeable components	21
6.9 Firmware and software updates	21
6.10 Environmental conditions	22
6.10.1 General	22
6.10.2 Factory acceptance testing	22
6.10.3 Site acceptance testing	22
6.11 Adjustments	23

6.11.1	General	23
6.11.2	Liquid classes	23
6.11.3	Adjustment of ALHS settings	23
6.12	Correction	23
6.13	Reporting of results	24
7	Specification of ALHS volumetric performance	24
7.1	Information to be supplied with the ALHS	24
7.2	Optional information	24
	Bibliography	25