

4LAB™

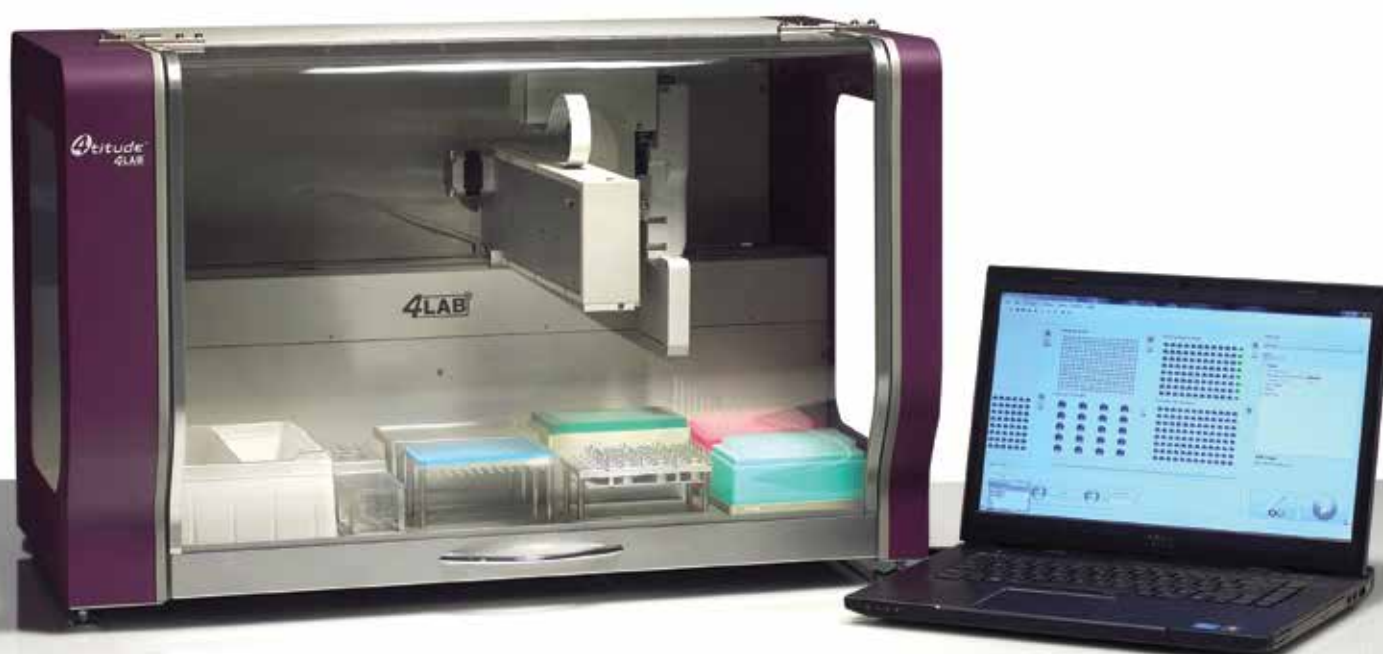
Automated Low Volume Liquid Handling

4titude's® 4LAB™ is an automated, high-precision pipetting system specifically designed for low-volume liquid handling. Low volume pipetting requires accuracy and consistency, which when performed manually, is tedious, time consuming and prone to human error.

The 4LAB™ guarantees accuracy, precision and consistency, and reagent wastage is

reduced. Unlike complex, multi-purpose robotic systems, our instrument was designed for the researcher without prior robotic experience. Intuitive set-up and programming will save your laboratory time and money straight away.

It is available as a 4-position or 6-position workstation.



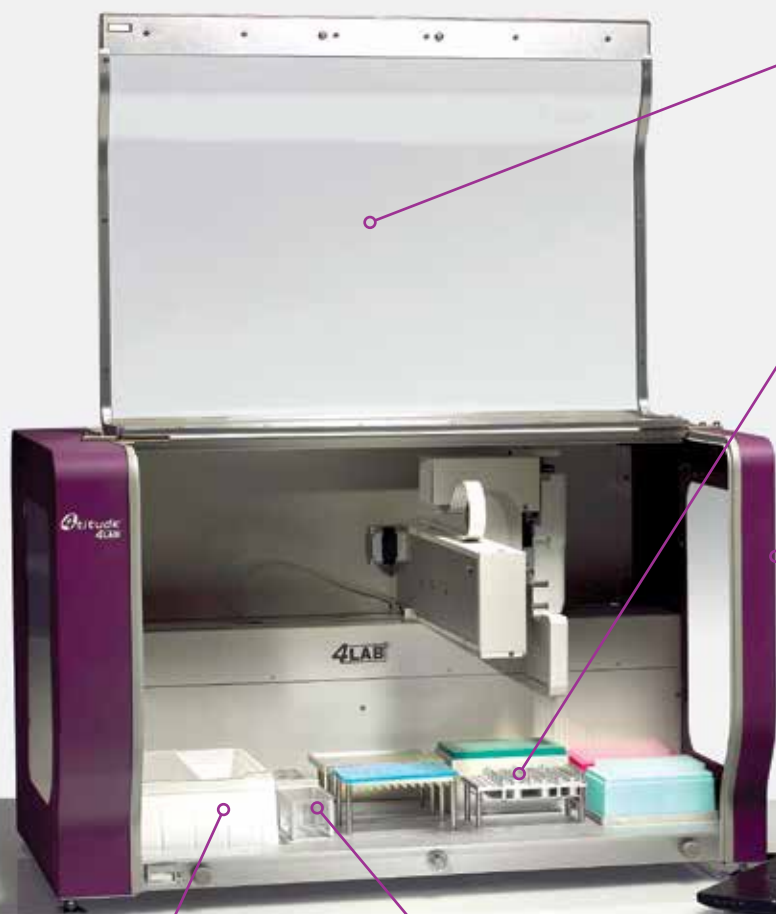
Coming soon

HEPA filtration with UV lamp option

Active heating / cooling block adapters

BIOKÉ
sharing knowledge

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Functional Safety Housing

- Safety door detection for emergency stop
- Light acrylic material

4-position or 5-position Worktable

- 1 or 2 tip racks
- 4LAB (4-position): 2 or 3 adapters for PCR plates/strips
- 4LAB6 (6-position): 4 or 5 adapters for PCR plates/strips
- Cooling blocks are available for 96 or 384-well plates

Compact Design

- Small footprint
- Extremely light

Disposable Used Tip Tray

- Capacity > 300tips

Reagent Area

- 2x4 2ml or 1.5ml microtubes
- 6x2ml free standing tubes & 1x5ml bottle
- Cooling blocks available for various reagent vessels

Notebook Computer with Software

- Pre-run simulation
- Windows® 7 operating system
- 15.6" monitor



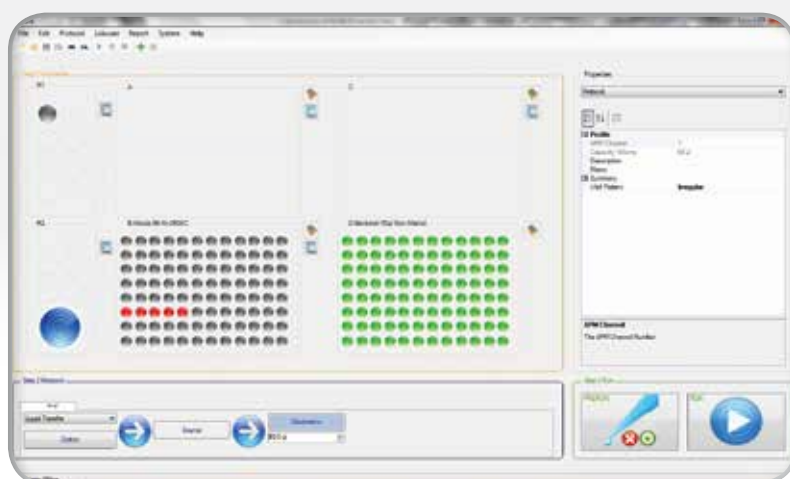
Automated Pipetting Modules (APM) Easy to Service

- Easy to change
- Single or 8-channel, 50µl or 200µl
- Automatic channel and volume identification

- The automated pipetting modules are simple to remove and can be returned for service and calibration.
- PC software is upgraded via the internet.
- The entire system is compact and light.

Easy and Convenient to Use

- PC software can be mastered in an hour.
- No trained technician required.
- Built-in PCR/qPCR set-up protocols can be quickly modified and transferred via USB memory stick.
- Single and 8-channel, 50µl or 200µl automated pipetting modules can be changed without tools.
- 4 interchangeable standard microplate / tip rack adapters and 2 interchangeable reagent vessel adapters available.
- Other applications include sequencing set-up, HLA typing and SNP detection, etc.



Versatile and Adaptable

Apart from PCR and qPCR the 4LAB™ supports other complex applications. A supplier of HLA genotyping kits has been using it successfully to process more than 5000 samples to date, all of which could be clearly analysed. The involved protocol is complex and prone to manual pipetting errors. By using the 4LAB™ the reagents and DNA samples are pipetted with consistency and accuracy.

Affordable Solution

"40% reagent costs and 50% labour costs were saved by adopting the 4LAB™ and 384-well PCR microplates in our SNP assay project which extended to 1 year ... the 4LAB™ provided the high accuracy and precision we needed." Director of the Contract Research Dept. 4LAB™ customer (Figure 1).

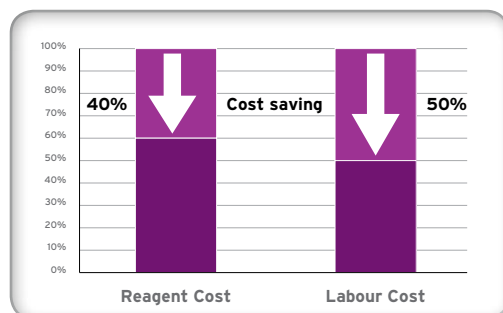


Figure 1. Cost Saving

A 4LAB™ customer cut reagent costs by 40% and labour costs by 50% by adopting the 4LAB™ in their SNP assay project.

Accurate and Precise

- Each Automated Pipetting Module (APM) is calibrated using ISO-8655 standards.
- Excellent results for qPCR standard curve and replicates (figure 2).
- Better Precision pipetting results than manual pipetting (figure 3).

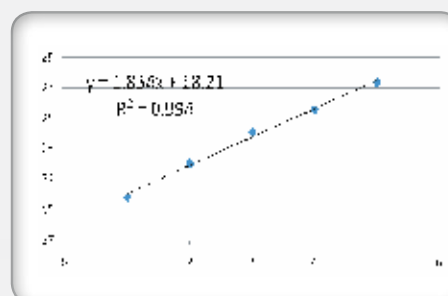


Figure 2. Excellent Serial Dilution Results

7µl NIH/3T3 Cell cDNA sample is diluted with 21µl water at 1:4 ratio, 4 times. Roche® LightCycler® 480 realtime PCR thermal cycler and Finnzyme DyNAmo® Flash SYBR® Green qPCR kit (F-415L) were used.

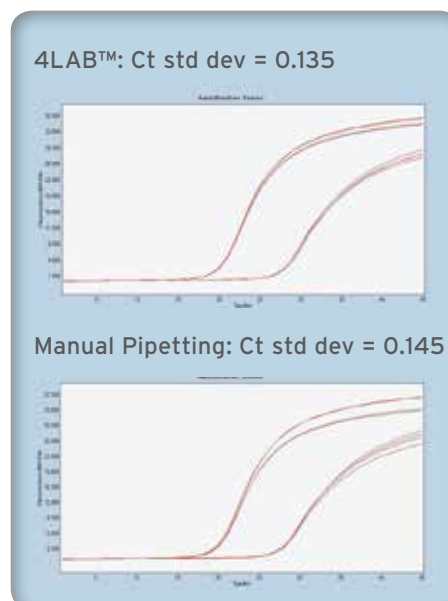


Figure 3. Superior Precision Results vs Manual Pipetting

Target: Human GAPDH (top curve) was amplified in 4 replicates. 18µl master-mix and 2µl cDNA were pipetting into 20µl reaction volume. Roche® LightCycler® 480 real-time PCR thermal cycler and Invitrogen™ Platinum® Taq DNA Polymerase were used.

Ordering Information

Code	Description	
4ti-2000	4LAB™ 4-Position System with Notebook Computer and Control Software	1
4ti-2200	4LAB6 6-Position System with Notebook Computer and Control Software	1
4ti-2010	50µl Single Channel Pipetting Module	1
4ti-2020	50µl 8-Channel Pipetting Module	1
4ti-2030	200µl Single Channel Pipetting Module	1
4ti-2040	200µl 8-Channel Pipetting Module	1
4ti-2051	96 Tip Rack Adapter	1
4ti-2052	Elevated 96-Well PCR Plate Adapter	1
4ti-2053	Elevated 384-Well PCR Plate Adapter	1
4ti-2054	1.5ml Tube Adapter, 4 x 2	1
4ti-2055	2ml (3x2) & 5ml (1) Tube Adapter	1
4ti-2056	Cooling Block for 96-Well PCR Plates	1
4ti-2057	Cooling Block for 384-Well PCR Plates	1
4ti-2058	Cooling Block for 1.5ml Tubes (4x2)	1
4ti-2059	Cooling Block for 2ml (3x2) and 5ml (1) Tubes	1
4ti-2060	20x1.5ml Tube Adapter	1
4ti-2061	Used Tip Tray, Disposable	10
4ti-2062	8-Channel Pipetting Reservoir	1
4ti-2063	Deep-Well Plate Adapter	1
4ti-2064	Reservoir (80ml)	20
4ti-2100	50µl Pipette Tip, Non-Sterile	10x96
4ti-2101	200µl Pipette Tip, Non-Sterile	10x96
4ti-2104	50µl Pipette Tip, Filtered, Sterile	10x96
4ti-2105	200µl Pipette Tip, Filtered, Sterile	10x96
4ti-2065	Cooling Block for 20x1.5ml Tubes	1
4ti-2066	HLA Typing 96-well Terasaki Tray Adapter	1
4ti-2067	HLA Typing 60 and 72-well Terasaki Tray Adapter	1
4ti-2068	0.5ml Tube Adapter For 4ti-2060	1

Trademarks: Beckman®, Biomek® 3000 (Beckman Coulter Inc.); Roche®, LightCycler® 480 (Roche Group); DyNAMO™ (Finnzyme Oy); SYBR® (Molecular Probes Inc.); Invitrogen™ Platinum® (Invitrogen Corp.)

Note: Specifications are subjected to change without notice.



Used tip tray
4ti-2061



Elevated 384-well PCR
adapter 4ti-2053



1.5ml (20) tube adapter
4ti-2060



Elevated 96-well PCR
adapter 4ti-2052



Deep-well plate adapter
4ti-2063



1.5ml (4x2) tube adapter
4ti-2054



2ml (3x2) & 5ml (1) tube
adapter 4ti-2055



8-Channel pipetting
reservoir 4ti-2062

Technical Specification

Worktable Capacity: 2 to 3 x 96 / 384 SBS PCR plates
1 to 2 x 96 tip rack (50/200µl)
Reagent Area 1: 8 x 1.5/2 ml microcentrifuge tube
Reagent Area 2: 6 x 2 ml storage tube (free standing) and 1 x 5 ml bottle

Function: Liquid (Sample/Reagent) Transfer (LT)
Multiple Dispense (MD)
Serial Dilution (SD)
Hold (Pause)
Mixing (MIX)
Loop

Automated Pipetting: Interchangeable single/8-channel,
Module: Maximum volume 50µl/200µl
Connection: RS-232, USB2.0
Power Supply: 100~240V, 50/60 Hz, 100W
Size (W x D x H): 590 x 440 x 460 mm
Weight (N.W.): 25 Kg