



**[ Accelerate sample preparation,  
eclipse SARS-CoV-2 ]**

Fast, reliable SARS-CoV-2 research detection with the  
Multidrop Combi and ALPS5000 system

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## Faster detection with reliable results

In thousands of laboratories worldwide the qPCR-based detection of SARS-CoV-2 RNA in research samples is now used and high sample throughput has never been more important. The Thermo Scientific™ Multidrop™ Combi Reagent Dispenser supports faster nucleic acid extraction in the detection of SARS-CoV-2 in research samples. By filling Thermo Scientific™ KingFisher™ Wash and Elution Plates in seconds, sample preparation is faster, improving productivity and enabling quicker test results. Automating the plate filling also reduces the risk of error and improves consistency to support reliable results. After the filling process, the wash and elution plates can then be quickly and easily sealed until ready for use with the Thermo Scientific™ ALPS5000™ Automated Plate Heat Sealer. Prior to detection by RT-qPCR the ALPS5000 system can also be used to provide fast, accurate and consistent sealing of qPCR plates.

### Sample Preparation Workflow



**Used together the Thermo Scientific™ KingFisher™ Flex Purification System, the Multidrop Combi Reagent Dispenser and the ALPS5000 Automated Plate Heat Sealer provide:**

- High throughput sample processing and plate sealing
- Existing protocols, application notes and support
- High quality, consistent and reliable results
- Easy installation and run of 96-well format

## Multidrop Combi Reagent Dispenser

**The Multidrop Combi Reagent Dispenser is ideal for rapid, accurate and consistent filling of the KingFisher Wash and Elution Plates. This minimises pipetting and reduces the amount of pipette tips required. The Multidrop Combi system offers the following benefits:**

- Easy to set up, program and use
- Minimal manual effort required
- Rapid dispensing with excellent precision and reproducibility
- Fill a KingFisher elution plate with 50 µL per well in 6 sec<sup>1</sup>
- Dispense 500 µL per well of wash buffer/solution into a KingFisher deep well plate in 40 sec and 250 µL per well in 20 sec
- Backflush feature ensures minimal dead volume
- Easy to clean cassettes by flushing with ddH<sub>2</sub>O
- Traceability - Multidrop Combi SMART 2 system automatically tracks cassette usage and lifetime



Wash Plate 1	Wash Plate 2 and 3	Elution Plate
Wash solution	80% Ethanol	Elution buffer
This standard tube dispensing cassette for the Multidrop Combi dispenser is used to fill all wash and elution plates. We recommend using one dedicated cassette per solution type.		

You can order the following Multidrop Combi systems and accessories online at [thermofisher.com](https://thermofisher.com)

Cat. No.	Product Description
5840300	Multidrop Combi dispenser 100-240V, 50/60Hz
5840320	Multidrop Combi system with SMART 2 option, 100-240V, 50/60Hz
24072670	Standard tube dispensing cassette for Multidrop Combi system, 1-pack
24072671	Standard tube dispensing cassette for Multidrop Combi system, 5-pack
24072672	Standard tube dispensing cassette for Multidrop Combi system, 10-pack
24072675	SMART standard tube dispensing cassette for Multidrop Combi SMART 2 system, 1-pack
24072676	SMART standard tube dispensing cassette for Multidrop Combi SMART 2 system, 5-pack

<sup>1</sup>Using the Multidrop Combi dispenser with the Thermo Scientific™ E1-ClipTip™ Equalizer pipette versus manual pipetting results in a 63% reduction in hands-on time and a 24% increase in throughput for the RT-PCR workflow shown above. Reference: Thermo Fisher Scientific Technical Note 'The Thermo Scientific™ E1-ClipTip™ Equalizer Electronic pipette and Thermo Scientific™ Multidrop™ Combi Reagent Dispensers help improve the efficiency of preparing samples for RT-PCR'

# ALPS5000 Automated Plate Heat Sealer

The ALPS5000 Automated Plate Heat Sealer provides fast, reliable and quiet automated plate sealing. The utility of the ALPS5000 system allows for two plates to be sealed per minute simplifying different stages during sample preparation.

Benefits of the ALPS5000 system include:

- Quickly and easily seal both KingFisher and PCR plates
- KingFisher plates pre-filled by the Multidrop Combi system are easily sealed until ready for loading to the KingFisher system
- Precise control over sealing parameters to ensure repeatability and a consistent seal
- Touchscreen control and savable protocols
- Electrically driven with tool-free loading
- Easy to integrate into an automation or a robotics workflow



The following ALPS5000 system and accessories can be purchased online at thermofisher.com

Cat. No.	Description	Speed	Sealing Temperature Range	Operating Temperature Range	Sealing Plate Height
AB-5000	ALPS5000 Automated Plate Heat Sealer	30 seconds per plate	Ambient to 199°C	15°C to 40°C	7mm to 46mm

Cat. No.	Description	Plate Material	Sealing Conditions	Seal Integrity Range Applications	Applications
AB-3559	Thermo-Seal	PP	1.5 to 2.5 seconds at 165°C to 175°C	-80°C to 120°C	Long term storage including storage at low temperatures; transportation and high temperature applications such as PCR, including use in waterbath
AB-3738	Easy Pierce	PP, PE	0.5 to 3.0 seconds at 165°C to 175°C	-80°C to 80°C and up to 120°C with cyclor lid pressure	Well suited for 384-well formats where piercing is a useful method for sample retrieval; second seal can be applied over existing seal; suitable for PCR
AB-3720	Easy Pierce 20µm	PP, PE	0.5 to 2.0 seconds at 165°C to 175°C	-80°C to 80°C and up to 120°C with cyclor lid pressure	Well suited for 384-well formats where piercing is a useful method for sample retrieval; suitable for PCR
AB-3739	Easy Peel	PP, PE, COC	1.5 to 2.5 seconds at 165°C to 170°C	-200°C to 90°C and up to 120°C with cyclor lid pressure	Ideal for long term storage at low temperatures; seal can be applied, removed and a new seal applied several times; suitable for PCR
AB-3797	Clear Seal	PP, PS, PE	1.5 seconds at 170°C	-80°C to 80°C and up to 120°C with cyclor lid pressure	Ideal for fluorescence, colorimetric, and optical applications; suitable for PCR
AB-3799	Clear Seal Diamond	PP, PS, PE, COC	1.5 to 3.0 seconds at 170°C	-80°C to 120°C	Ideal for fluorescence, colorimetric, and optical applications; suitable for PCR

**Plate Material Key:** PP – polypropylene | PS – polystyrene | PE – polyethylene | COC – cyclic olefin copolymer

Description	PCR	DMSO	Pierce	Peel	qPCR
Thermo-Seal	X	X			
Easy Pierce	X	X	X	X	
Easy Pierce 20µm	X	X	X	X	
Easy Peel	X	X		X	
Clear Seal	X		X	X	X
Clear Seal Diamond	X			X	X

000 «Диаэм»

Москва  
ул. Магаданская, д. 7, к. 3 ■ тел./факс: (495) 745-0508 ■ sales@dia-m.ru

www.dia-m.ru

С.-Петербург  
+7 (812) 372-6040  
spb@dia-m.ru

Новосибирск  
+7 (383) 328-0048  
nsk@dia-m.ru

Воронеж  
+7 (473) 232-4412  
vrn@dia-m.ru

Йошкар-Ола  
+7 (927) 880-3676  
nba@dia-m.ru

Красноярск  
+7 (923) 303-0152  
krsk@dia-m.ru

Казань  
+7 (843) 210-2080  
kazan@dia-m.ru

Ростов-на-Дону  
+7 (863) 303-5500  
rnd@dia-m.ru

Екатеринбург  
+7 (912) 658-7606  
ekb@dia-m.ru

Кемерово  
+7 (923) 158-6753  
kemerovo@dia-m.ru

Армения  
+7 (094) 01-0173  
armenia@dia-m.ru

