

## Combustion-IC



## Thermo Scientific Cindion combustion ion chromatography (C-IC) system

### Keywords

Cindion, pyrolysis, combustion-ic, combustion-ion chromatography

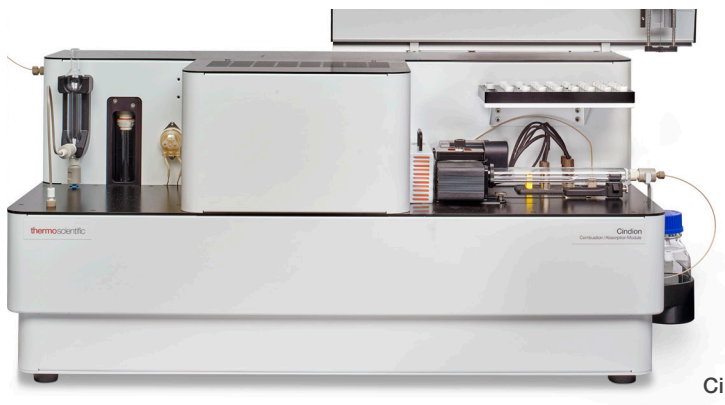
### A bold way to ignite new insights

Combustion-ion chromatography (C-IC) has become an indispensable tool to screen solid, liquid, and gas samples for corrosive and toxic halogens and sulfur constituents by removing potentially interfering sample components.

### Integrated solution, transformational benefits

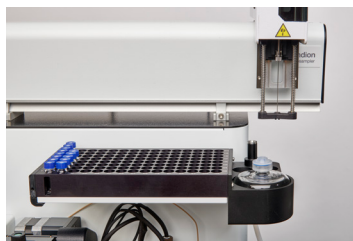
- Small system footprint – A novel, compact combustion tube design ensures complete combustion in a shorter distance. The autosampler and absorption tube are integrated into the combustion/absorption module.
- Minimized PFAS contamination – With its unique combustion front-end that incorporates non-detectable PFAS-containing components within the sample pathway, the Thermo Scientific™ Cindion™ Combustion Ion Chromatography (C-IC) System eliminates potential sources of PFAS during analysis to deliver the lowest achievable background levels enabling the most sensitive detection.
- Industry-leading IC features – Unique innovations include electrolytic suppression and reagent-free ion chromatography (RFIC™) eluent generation, which enhance consistency and facilitate ease of use.
- Single-source convenience – Acquire the complete system and all consumables from a single vendor for a seamless customer experience.
- Complete workflow package – Enjoy an unparalleled breadth of complementary technologies for analytical determinations—especially advantageous for PFAS analysis requiring both targeted and non-targeted analyses.
- Experience and support – Count on the extensive library of Thermo Scientific C-IC application notes for multiple sample types and benefit from our 50-year leadership in IC technology.

## Cindion C-IC system specifications

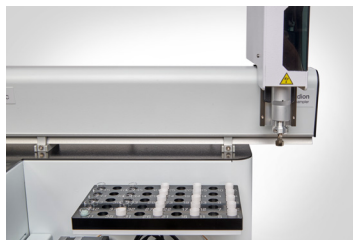


Cindion combustion/absorption module

Specification	Value
<b>Combustion/absorption module</b>	
<b>Gases</b>	
Connection type	1/8" Swagelok
Argon	99.998% technical grade (4.8)
Oxygen	99.999% technical grade (5.0)
Flow rate	100-500 mL/min (+/-25 mL/min)
Pressure	2-3 bar (30-45 psi)
<b>Combustion</b>	
Furnace temperature	500 to 1200 °C, 2 heating zones
Temperature accuracy	± 50 °C
<b>Absorption</b>	
Syringe volume	1-25 mL
Rinse	0-10x with up to 25 mL of rinse solution
<b>Physical specifications</b>	
Power requirements	110-240 V, 50-60 Hz, <1200 watt
Operating temperature	4 to 40 °C (40 to 104 °F); cold-room-compatible (4 °C) as long as system power remains on
Operating humidity range	5-80% relative, noncondensing
Control modes	Full control through Thermo Scientific™ Chromeleon™ Chromatography Data System (CDS)
USB communication protocol	One USB input; one built-in two-output USB hub
Ethernet/LAN	One input
Dimensions (w × h × d)	91.4 cm × 91.4 cm × 43.2 cm (36 in x 36 in x 17 in) with AS 91.4 cm × 43.2 cm × 43.2 cm (36 in x 17 in x 17 in) without AS
Weight	43 kg (94.8 lb) with autosampler (AS) 35 kg (77.2 lb) without AS



Cindion liquids autosampler



Cindion solids autosampler



Cindion LPG/gas module



Cindion adsorption module

#### Autosampler (AS)

Dimensions (w x h x d)	63.5 cm x 43.2 cm x 30.5 cm (25 in x 17 in x 12 in)
Weight	Approx 7.8 kg (17.3 lb)
Interchangeability	Switch between liquid syringe and a gripper for solid cups without any tools
<b>Liquids AS</b>	
Tray capacity	120 position, 2 mL vials
Syringe volume	10-500 µL
Wash vessel volume	100 mL
Waste volume	Waste vessel size dependent
<b>Solids AS</b>	
Tray capacity	45 position

#### Liquid petroleum gas (LPG)/Gas module

Power requirements	115-240 V, 50-60 Hz, max: 100 Watt
Operating temperature	4 to 40 °C (40 to 104 °F); cold-room-compatible (4 °C) as long as system power remains on
Operating humidity range	5-80% relative, noncondensing
Dimensions (w x h x d)	38.1 cm x 40.6 cm x 48.3 cm (15 in x 16 in x 19 in)
Weight	18 kg (39.7 lb)
Primary pressure gas sample	≤ 40 bar
Secondary sampling pressure	2-5 bar, internal adjustable
Primary pressure (LPG)	≤ 20 bar
Secondary sampling pressure (LPG)	Automatically controlled
Quick fit connector gas/LPG cylinder	¼" Swagelok (SS) QC4 SS Series Swagelok (DESO type)
Evaporation temperature	Ambient to 75 °C
Sample loops	10 mL for gases, 25 µL for LPG
Safety sensor	Hydrocarbon
Pathway tolerance	Inert (Sulfinert)

#### Adsorption module

Power requirements	115/230 V, 50/60 Hz, max: 90 Watt
Operating temperature	4 to 40 °C (40 to 104 °F)
Operating humidity range	20-80% relative, non-condensing
Dimensions (w x h x d)	46.4 cm x 55.2 cm x 48.6 cm (18.5 in x 21.8 in x 19.1 in)
Weight	17.8 kg (39.2 lb)
Sample positions	6
Maximum flow rate	10.0 mL/min
Sample volume	Up to 120 mL
Wash volume	Up to 60 mL



Inuvion IC system

IC system (shown: Thermo Scientific™ Dionex™ Inuvion™ IC system)	
Power requirements	100–240 V AC, 50–60 Hz autoranging
Operating temperature	4 to 40 °C (40 to 104 °F)
Operating humidity range	20-80% relative, non-condensing
Control modes	Full control through Chromeleon CDS; alternative control through TTL or relay closures; one relay output, two TTL outputs, two assignable TTL inputs
USB communication protocol	One USB input; three USB outputs
Product dimensions (h x w x d)	66.1 x 29.2 x 43.2 cm (26.0 x 11.5 x 17.0 in.)
Weight	16.2 kg (36 lb)

[Dionex Inuvion IC system specifications](#)

Software	
Chromeleon CDS, version 7.3.2 MUD and above	<ul style="list-style-type: none"> <li>• Full control of combustion/absorption module, LPG/gas module, autosampler, and Dionex Inuvion IC system</li> <li>• Autoconfiguration</li> <li>• Automated procedure wizards</li> <li>• Data trending plots (numerical device parameters)</li> <li>• Virtual column simulator (evaluation mode standard, isocratic and gradient optional)</li> <li>• Multi-vendor automation support of proprietary and 3rd party instruments (fully controls over 550 modules from more than 25 manufacturers, including GC, CE, HPLC, and MS)</li> <li>• Customizable system control panels</li> <li>• System status virtual channels</li> <li>• System trigger commands and conditionals</li> <li>• Data audit trail, system audit trail and instrument audit trail</li> <li>• Multiple network control and network failure protection (optional)</li> <li>• System calibration storage (factory, present, and previous; completely user selectable)</li> <li>• Customized reporting (unlimited report workbooks)</li> <li>• Automated system qualification (detailed, comprehensive qualification reports)</li> <li>• Dual sequence view in the studio</li> </ul>

## Ordering information

Description	Part no.
Cindion C-IC system combustion/absorption module	B51006425
Cindion C-IC system liquids kit	B51006426
Cindion C-IC system solids kit	B51006427
Cindion C-IC system LPG/gas module	B51006428
Cindion C-IC system autosampler	B51006429
Cindion C-IC system adsorption module	B51006430
<b>Consumables/accessories</b>	
Combustion tube	B51006432
Absorber tube	B51006433
Glass connector outlet 1/4"	B51006434
Inlet silicone sponge gasket	B51006435
Boat guiding tube	B51006444
Solids boat for use with autosampler	B51006443
Liquids boat for use with autosampler	B51006445
10 µl PFAS-free syringe removable needle (no needle included)	B51006436
25 µl PFAS-free syringe removable needle (no needle included)	B51006437
100 µl PFAS-free syringe removable needle (no needle included)	B51006438
250 µl PFAS-free syringe removable needle (no needle included)	B51006439
500 µl PFAS-free syringe removable needle (no needle included)	B51006440
6 pack of needles blunt point for syringes up to 100 µl	B51006441
6 pack of needles blunt point for 250 or 500 µl syringes	B51006442
Septum, 12 mm diameter, 10 pcs	B51006449
2 mL vial with septum (PFAS-free) + screwcap (100 pcs)	B51006450
Quartz wool, 10 g	B51006451
Quartz cup, 1 pc	B51006446
Quartz cup, 45 pcs	B51006447
Porcelain cup, 3 pcs	B51006448
Carbon columns (100/pack)	B51006452
Column holder, 1 pc	B51006453

 Learn more at [thermofisher.com/cindion](https://thermofisher.com/cindion)

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