

SMART

COPREHENSIVE CONTAMINATION TRACKER

CT 100

CT100 is the world's first truly-mobile comprehensive sampler featuring nanoparticle counting, trace metal collection, and trace chemical collection.

CT 100 delivers the necessary features of Semiconductor FAB monitoring including the real-time nanoparticle counting and the trace metal and gas element analysis through post processing like ICP-MS and GC-MS.



Element Analysis

1	2											10					
3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
11	12											13	14	15	16	17	18
19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54
55	56	57	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86
87	88	89	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118
89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106



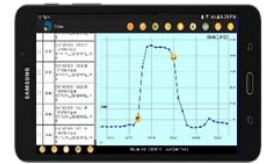
Accurate



Mobile



Bluetooth



Smart

SMART FEATUTRES

- **Simple and easy operation:** no need for professional training
- **Full automatic operation:** all processes are automatic including measurement, data saving, status report, self-diagnostics, automatic-shut down, etc.
- **Mobile:** sustainable for normal human activities like running, jumping, driving, working.
- **Wireless and wired:** Bluetooth and mini USB implemented
- **Taking data-synched videos and pictures:** by EView loaded Android devices.
- **Taking data-synched text notes:** by EView loaded Android devices.
- **Cloud data storing and sharing:** using Eview in android devices report real-time data

Comprehensive Sensing FEATUTRES

Particle Counting:

- **Pin-point accuracy:** Single-particle counting
- **Incomparable Limit of Detection (LOD):** 4.5 nm measurement sensitivity
- **Real-time:** response time is less than 0.5 second
- **Low counting error**

Element Sampling

- **Comprehensive sampling:** simultaneous collection of gas-borne nanoparticle, trace metal, metal ion, and organic trace chemical
- **Superior collection power:** collecting the particle and trace metal element less than 1 nm. Best performance to sample trace chemical elements.
- **Short sample preparation time** for ICP-MS and GC-MS analysis

Specification

Model: CT100

Nanoparticle Counting

Particle Counting Principal	Water-based condensation particle counting
Particle Size Range	4.5 nm (D_{50} with Hydrophilic NaCl particles) to $\geq 3 \mu\text{m}$
Particle Counting	Single particle counting with coincidence correction
Particle Counting Range	0 to 2.0×10^5 particle/cm ³ (0 to 2.0×10^{11} particle/m ³)
Counting Accuracy	$\pm 10\%$
Response Time	≤ 0.5 second
Sampling Frequency	0.1 – 1.0 second
Report Frequency	1.0 second
Sampling Flow rate	0.3 l/min $\pm 10\%$
Flow Driven Source	Internal micro diaphragm pump
Mobile Sustainability	± 6 g
Operation Hour	6 hours continuous operation powered by battery

Element Sampling

Sampling Principal	Condensational diffusion
Collection Capability	Particle: less than 1 nm, Trace metal and ion: less than 1 nm, Trace organic and inorganic chemical: both polar and non-polar chemical
Collection Efficiency	Particle: $> 90\%$, Trace metal and ion: $> 90\%$, Trace organic chemical: Varied

General

Data Transfer	USB and Bluetooth
Data	Particle concentration, Local time Greenwich Mean Time (GMT), Geolocation, Elevation, Picture, Video, Text
Dimensions (H x W x D)	7 x 12 x 19 cm including Li-Po battery and water chamber + Collector tube
Weight	1.1 kg including Li-Po battery and water chamber
Operation environment	Relative Humidity: 10 – 99%, Temperature: 10 to 40 °C
Operation Hour	6 hours continuous operation powered by battery