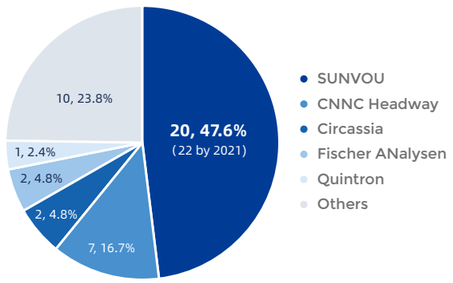
About Sunvou

SUNVOU is global leader in breath molecular diagnosis technology innovations, with the most granted patents, the most registered products, 400+ peer reviewed publications, 4,000+ devices in hospitals and 12 million+ tests from 2012 to 2021, founded by formal NASA, Honeywell, CISCO and Huawei scientists & engineers, joined by MIT and UC Berkeley graduates.

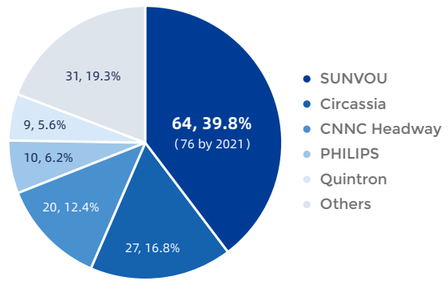
Most Registered Products Worldwide

Data Source: Breath Test Medical Devices Market Research, Frost Sullivan, 2019



Most Granted Patents Worldwide

Data Source: Breath Test Medical Devices Market Research, Frost Sullivan, 2019



70+ Granted Patents

400+ Peer Reviewed Publications

ISO 13485 by TUV Rheinland since 2011

CE Marked since 2012

Management System
EN ISO 13485:2016
www.tuv.com
ID 0000040691

CE IVD

Sunvou Medical Electronics Co., Ltd.
#8 Jingxian Road, Xinwu District, Wuxi,
214000 Jiangsu, P.R. China

www.sunvou.com

Nano Coulomb Breath Analyzer

for exhaled NO, CO & H_2S detection

70+ Granted Patents, **4000+** Devices in Hospitals, **12 million+** Clinical Tests
400+ Peer-reviewed Publications, **8+** Guidelines & Consensus

1+2 innovations by Sunvou

1+2 | Detection Options

Online + Offline & Tidal
Age > 6 + 3-6 & < 3 / ICU

1+2 | Airway Sites

Large airway + Small airway & Upper airway
Asthma + COPD & Allergic rhinitis, etc.

Model: CA2122

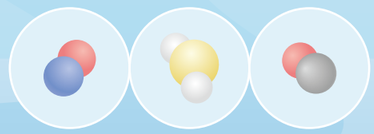
Model: TM1100

1+2 | Quality Controls

Qualified User+ Cylinder Gas & Self-calibration
User + Manufacturer & Device Auto-Check

1+2 | Exhaled Biomarkers

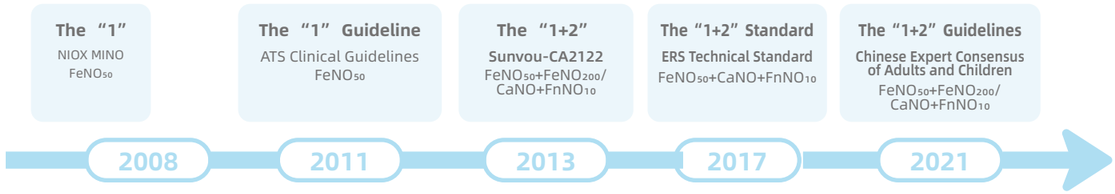
NO + H_2S & CO
Type 2 + Non-Type 2 & Mixed



1+2 | Products

	The “1”	The “1+2”	The “Clinics and Home”
Sensor Technology	Micro Amperometric Electrochemical Sensor	Nano Columbic Electrochemical Sensor	
Product Model	NIOX MINO / NIOX VERO	Sunvou-CA2122	Sunvou-TM1100
Display	3.5 Inch LED Screen	Connect PC to Display	4.3 Inch LED Screen
Power	Rechargeable Battery	AC Adapter	Rechargeable Battery
NO Parameters	$FeNO_{50}$	FeNO + CaNO & FnNO	$FeNO_{50}$
Detection Options	Online	Online + Offline & Tidal	Online
Biomarkers	NO	NO + **H_2S** & CO	NO
Quality Controls	Qualified User	Qualified User + Standard Gas & Self-calibration	Qualified User
Detection Range	5-300 ppb	0-3000 ppb	5-300 ppb
Linearity	$R^2 \geq 0.998$	$R^2 \geq 0.99$	$R^2 \geq 0.99$
Endogenous Interference of NO	13 interfering gases tested, the response value of a few gases is greater than 50 ppb (ethanol interferes the most, which could invalidate or disable the sensor)	16 interfering gases tested, the interference of methyl mercaptan is 4 ppb, others <3 ppb (ethanoll has interference, which can reduce the test value instantaneously, use with caution)	

1+2 | Standards and Guidelines



	The "1" Guideline	The "1+2" Guidelines		
Cut Value	$FeNO_{50}$ 25/50ppb	$FeNO_{50}$ 25/50ppb	$FeNO_{200}$/CaNO 10ppb / 5ppb	$FnNO_{10}$ 250/500ppb
Inflammation Types	Eosinophilic Inflammation	Type 2 inflammation (including eosinophilic and allergic inflammations)		
Inflammation sites	Large airway	Large airway	Small airways/alveoli	Upper airway
Indications	Asthma and Chronic Cough	Asthma, Cough, COPD, IPF, Pneumonia, etc. Allergic Rhinitis, Sinusitis, Nasal Polyps, PCD, etc.		

The “1” Guidelines: Dweik R, Boggs P, Erzurum S ,et al. An Official ATS Clinical Practice Guideline:Interpretation of Exhaled Nitric Oxide Levels (FENO) for Clinical Applications. Am J Respir Crit Care Med. 2011;184: 602-615.

The “1+2” Standards: Horváth I, Barnes PJ, Loukides S, et al. A European Respiratory Society technical standard: exhaled biomarkers in lung disease. Eur Respir J 2017; 49: 1600965.

The "1+2" Guidelines: Chinese Medical Education Association Chronic Airway Disease Professional Committee, China Asthma Alliance. Exhaled Nitric Oxide Detection and Chinese Expert Consensus on Its Application in Diagnosis and Treatment of Airway Diseases[J]. Chinese Medical Journal, 2021, 101(38):3092-3114. DOI: 10.3760/cma.j.cn112137-20210210-00408.

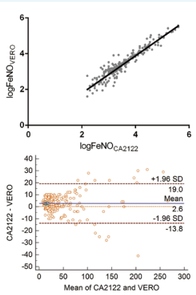
The "1+2" Guidelines: Asthma Collaborative Group of Respiratory Group, Pediatrics Branch of Chinese Medical Association. Expert consensus on detection and clinical application of exhaled nitric oxide in children (2021 edition) [J]. Chinese Journal of Practical Pediatrics, 2021, 36 (6): 417-423. DOI: 10.3760/cma.j.cn101070-20210127-00114.

“Niox Vero" vs “Sunvou CA2122” Comparison

References: Lei W, Li F, Tang XM, et al. The comparision of two exhaled nitric oxide analyzers: NIOX VERO and SUNVOU-CA2122. J Breath Res. 2021. 15 026007.

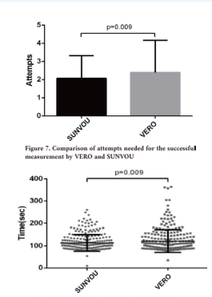
Correlated and Consistent Results

SUNVOU-CA2122 vs NIOX VERO, highly correlated and consistent results



Fewer Attempts and Less Time

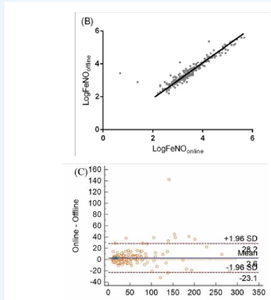
SUNVOU-CA2122 requires fewer attempts and less time than NIOX VERO for a successful measurement



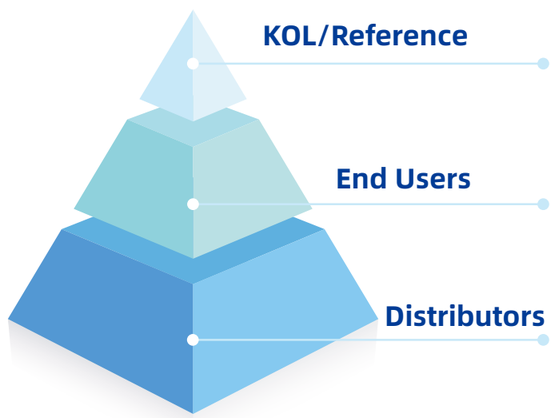
Online vs Offline

SSUNVOU-CA2122 Online vs Offline Results highly correlated and consistent results

#Offline Sampling Techniques not available for NIOX VERO



1+2 | Service



Supported the Establishment of 8 National Guidelines and Consensus

Sponsored **200+** clinical rearserch projects, **400+** Peered Reviewed Publications. **2** National Breath Test QC Center

Serving 30,000+ Clinicians and Nurses

100+ Training courses, **200+** On-line reading articles

1000+ Literatures, **1000+** Annual conferences

Customer Survey Satisfaction >99% for 11 Consecutive Years

Installation/training/QC/upgrade **3000+**

24-hr online 1-to-1 service, and **200+** instant chat service groups