Nano Coulomb Breath Analyzer

for exhaled NO & CO detection

70+ Granted Patents, **5000+** Devices in Hospitals, **15 million+** Clinical Tests
400+ Peer-reviewed Publications, **8+** Guidelines & Consensus

innovations by SUNVOU



Samplings

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



Airways

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

6-10 sec sampling



CA2122



TM2120

70-100 sec analysis

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

CE IVD

Quality Controls

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



Gases

NO + CO
Type 2 Inflammation



[1] ATS/ERS Recommendations for Standardized Procedures for the Online and Offline Measurement of Exhaled Lower Respiratory Nitric Oxide and Nasal Nitric Oxide. 2005. https://www.atsjournals.org

[2] Wei Lei,Jian-An Huang, et al. The comparison of two exhaled nitric oxide analyzers: NIOX VERO and SUNVOU-CA2122.J Breath Res. 2021 Jan 22;15(2).

[3] Collaboration Group of Asthma, the Subspecialty Group of Respiratory Disease, the Society of Pediatrics , Chinese Medical Association. Expert consensus on detection and clinical application of exhaled nitric oxide in children(2021 edition) [J]. Chin J Appl Clin Pediatr, 2021, 36(6): 417-423. DOI: 10.3760/cma.j.cn101070-20210127-00114.

[4] Chronic Airway Disease Professional Committee of China Medical Education Association, China Asthma Alliance. Chinese expert consensus on detection of exhaled nitric oxide and its clinical application in the diagnosis and treatment of airway diseases [J] . Natl Med J China , 2021, 101(38) : 3092-3114. DOI: 10.3760/cma.j.cn112137-20210210-00408.

[5] Global Initiative for Asthma. Global Strategy for Asthma Management and Prevention. 2022.https://ginasthma.org/.

[6] 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.

[7] 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.

[8] Rimmer J, Fokkens WJ, Hellings P, et al. European Position Paper on Diagnostic Tools in Rhinology. Rhinology.2019, 28: 1-42.

Measurement Options [1,2,3,4]

For All Age Groups



Online

- Single breath, 6-10 seconds
- > 6 years old

+



Offline



- Multiple breaths, accumulated 6-10 seconds
- 3-6 years old or failed Online

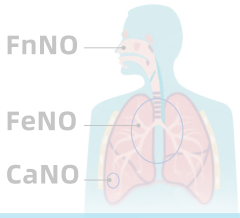


Tidal

- Multiple free breaths
- 0-3 years old or failed Online/ Offline

NO Parameters [5,1,6,7,8]

For Type-2 Inflammation in All Airways



FeNO 50

Large airways NO (bronchi)

+

Low value → Small Airways ?

High value → Upper Airways ?

CaNO/FeNO 200

Small airways NO (alveoli)

- Low value → Non-type-2 inflammation; Non-ICS treatment
- High value → Small airways Type-2 inflammation; Extrafine ICS, OCS and/or LTRA

FnNO 10

Upper airways NO (nose)

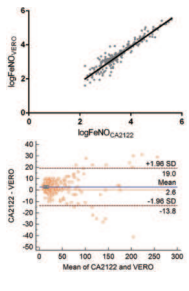
- Low value → Closed sinus ostia or CF, PCD; NICS or Endoscopic Surgery
- Medium value → Large airways Type-2 inflammation; ICS
- High value → Large + upper airways Type-2 inflammation; ICS+ NICS

"Sunvou CA2122" vs "Niox Vero" 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.

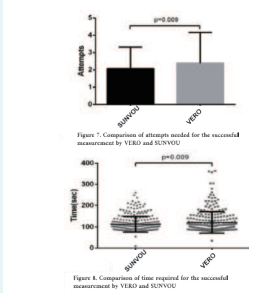
Correlated and Consistent Results

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



Fewer Attempts and Less Time

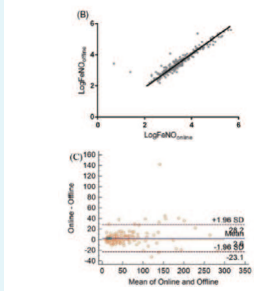
SUNVOU-CA2122 requires fewer attempts and less time than NIOX VERO for a successful measurement



Online vs Offline

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

#Offline Sampling Techniques not available for NIOX VERO



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