

Cite this as: Mingtao LIU, Li LIU, Jiayi CHEN, Zhifeng HUANG, Huiqing ZHU, Shengxuan LIN, Weitian QI, Zhangkai J. CHENG, Ning LI, Baoqing SUN. Thirteen serum biochemical indexes and five whole blood coagulation indices in a point-of-care testing analyzer: ideal protocol for evaluating pulmonary and critical care medicine. *Journal of Zhejiang University-SCIENCE B (Biomedicine & Biotechnology)*, 2025, 26(2):158-171.
<http://doi.org/10.1631/jzus.B2300433>

Thirteen serum biochemical indexes and five whole blood coagulation indices in a point-of-care testing analyzer: ideal protocol for evaluating pulmonary and critical care medicine

Key words: Thirteen serum biochemical indexes, Five whole blood coagulation indices, Point-of-care testing (POCT), Pulmonary and critical care medicine, Diagnostic protocol

Research Summary

This study is an important breakthrough as it is the first in our country to analyze the time difference between two types of testing equipment – a conventional large-scale analyzer and a PUSHKANG POCT analyzer.



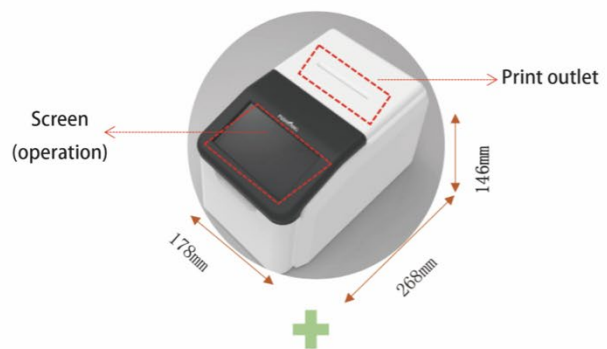
**Biochemistry Analyzer
MS100**



**Coagulation Analyzer
MC100**

Moreover, our study has successfully gathered statistical data related to the changes in the patient's condition and proportion within the time difference post-clinical application of POCT analyzer.

A. PUSHKANG MS100



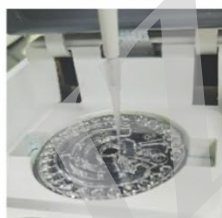
Bracket



Microfluidic Platter
(freeze-dried reagent)



Drop platter



Add sample and diluent



Click Start



View the result

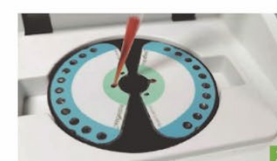
B. PUSHKANG MC100



Microfluidic Platter
(freeze-dried reagent)



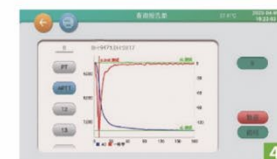
Drop platter



Add sample and diluent



Click Start



View the result

Innovation points

A series of comprehensive tables were generated to summarize the latest knowledge about PUSHKANG POCT versus traditional analyzer.

Table 1 | Comparative analysis of sample data between PUSHKANG POCT and traditional analyzer

Table 2 | Assessment of normality for analytical parameters in PUSHKANG POCT versus traditional analyzer

Table 3 | Intraclass correlation coefficient outcomes for comparative data analysis: reference versus MS100/MC100 devices

Table 4 | Spearman correlation analysis in PUSHKANG POCT and traditional analyzer