# AST-CD-800 Total Organic Carbon Analyzer

## I. Product Introduction

Principle: The sample is fully combusted and decomposed into carbon dioxide and water at high temperature using a high-performance oxidation catalyst in a combustion furnace. Water vapor is removed after cooling by a condenser. Carbon dioxide is measured using a non-dispersive infrared detector (NDIR), thus determining the total organic carbon (TOC) content in the sample. Similarly, inorganic carbon in the sample is decomposed into carbon dioxide and water using an acid reagent. Water vapor is removed after cooling by a condenser, and carbon dioxide is measured using an NDIR, thus determining the total inorganic carbon (TIC) content in the sample. Total organic carbon (TOC) = TC - TIC.

## II. Product Parameters

1. Analytical Method: High-temperature oxidation-NDIR detection principle

2. Detectable Items: TC, IC, TOC, NPOC

★3. TOC Detection Range: 0.050～35000mg/L

★4. Detection Accuracy: 0.050mg/L

5. Combustion Furnace Temperature: Maximum 1100℃

6. Accuracy Error: ≤±5%

7. Injection Volume: 20～1000ul

8. Analysis Time: 3～8min

★9. Repeatability Error: ≤3%

10. Zero Drift: ≤±2%/D

11. Range Drift: ≤±2%/D

12. Acid Reagent: Phosphoric acid solution

13. Carrier Gas: High-purity oxygen (≥99.999%)

14. Ambient Temperature: 0～40℃

15. Relative Humidity: ≤85%

16. Power Requirements: 220V AC≤±10% 50Hz (Reliable grounding)

17. Power: 800W

18. Basic dimensions: 60cm×43cm×42cm

19. Weight: 40kg

## III. Product Features

1. 7-inch touchscreen, user-friendly interface, simple and convenient operation;

2. Three-pass electronic condensation dehydration technology ensures the dehydration efficiency of the entire system;

3. High-reflectivity gold-plated gas chamber, high-focus infrared light source, and high-sensitivity infrared detector guarantee excellent NDIR performance, providing sufficient sensitivity and accuracy for ppb-level data measurement;

4. Maximum temperature up to 1100℃, with the ability to select different catalysts (such as CeO, Pt, CuO) and set different temperatures according to the sample;

5. Remote control for troubleshooting;

★6. Automatic fault warning (pump, valve, pipeline, detector);

7. Real-time self-monitoring of multiple temperature, pressure, and flow rates;

8. The combustion furnace heating system employs multiple protection mechanisms, automatically cutting off heating in case of overheating, improving product safety;

9. The inorganic carbon reaction cell is designed with a heating device, eliminating sample peak tailing and shortening sample determination time;

10. Built-in dot matrix printer, reducing space occupation;

11. 10-year data storage capacity, convenient for querying, and can be queried by time period;

12. Password protection function;

★14. Can be connected to a 76-bit autosampler;

15. Can be connected to a solid sampler for solid sample injection;

16. Complies with international standard ISO8245, People's Republic of China National Environmental Protection Standard HJ501-2009, and People's Republic of China National Metrological Verification Regulation JJG 821-2005.