

# GS-Tek

## GS-Tek ANALYZER

Accuracy/High efficiency/Fast speed/Reliability



**Offer you an accurate and reliable analytical solution**  
**Diversified combinations and affordable system configuration**  
**Timely after-sales support service, your best partner**

The continuous consumption of fossil fuels and emissions of a large amount of carbon dioxide have caused many problems such as the global energy crisis and climate change. It is a very promising strategy to reduce CO<sub>2</sub> by photocatalysis and convert it into environmental-friendly and clean hydrocarbon fuel.

The analyzer introduced in this note can be used to analyze various substances produced in the process as well as final products of photocatalysis, which can accurately monitor the various changes and details of the catalytic reaction.



## Analyzer of Photocatalytic Reaction

### Features of Analyzer:

1. Equipped with a unique oxyFID detector, the device can analyze CO, CO<sub>2</sub>, formaldehyde, formic acid and methanol, the concentration of which is as low as 1ppm
2. can analyze formaldehyde, formic acid and methanol in water
3. Through the most reasonable valve and flow path configuration, the analysis of most compounds can be achieved.
4. Can extend to C<sub>3</sub> analysis.



# Analyzer of Photocatalytic Reaction

## Instrument configurations:

Three valves / six columns (packed columns and capillary columns) / TCD + oxyFID

Channel 1 is used to test CO, CO<sub>2</sub>, CH<sub>4</sub>, C<sub>2</sub>H<sub>4</sub>, C<sub>2</sub>H<sub>6</sub>, C<sub>2</sub>H<sub>2</sub>, can extend to C<sub>3</sub>

Channel 2 is used to test methanol, formic acid and formaldehyde in water

Channel 3 is used to test H<sub>2</sub> and O<sub>2</sub>

Unique oxyFID detector is used to analyze CO, CO<sub>2</sub>, formaldehyde, methanol, formic acid and other hydrocarbons with ultra-high sensitivity and wide response range, which greatly meets the analysis requirements.

Note: this system can be equipped to SHIMADZU and AGILENT host system.

## Sample:

Products in the photocatalytic reaction

## Target compounds:

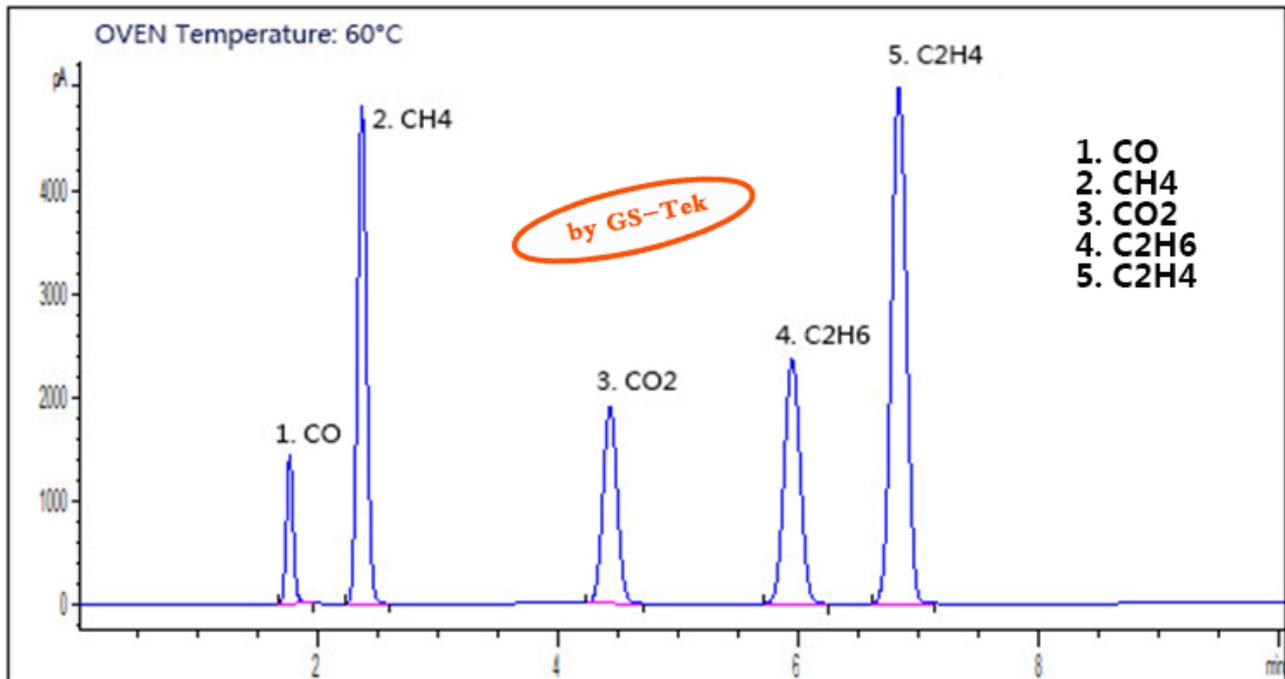
H<sub>2</sub>, O<sub>2</sub>, CO, CO<sub>2</sub>, CH<sub>4</sub>, C<sub>2</sub>H<sub>4</sub>, C<sub>2</sub>H<sub>6</sub>, C<sub>2</sub>H<sub>2</sub>, can extend to C<sub>3</sub>; methanol, formic acid and formaldehyde in water

## Detector sensitivity:

CO, CO<sub>2</sub>, CH<sub>4</sub>, C<sub>2</sub>H<sub>4</sub>, C<sub>2</sub>H<sub>6</sub>, C<sub>2</sub>H<sub>2</sub>, C<sub>3</sub>, methanol, formic acid and formaldehyde >1ppm

H<sub>2</sub>, O<sub>2</sub>>0.01%

## Typical chromatogram:

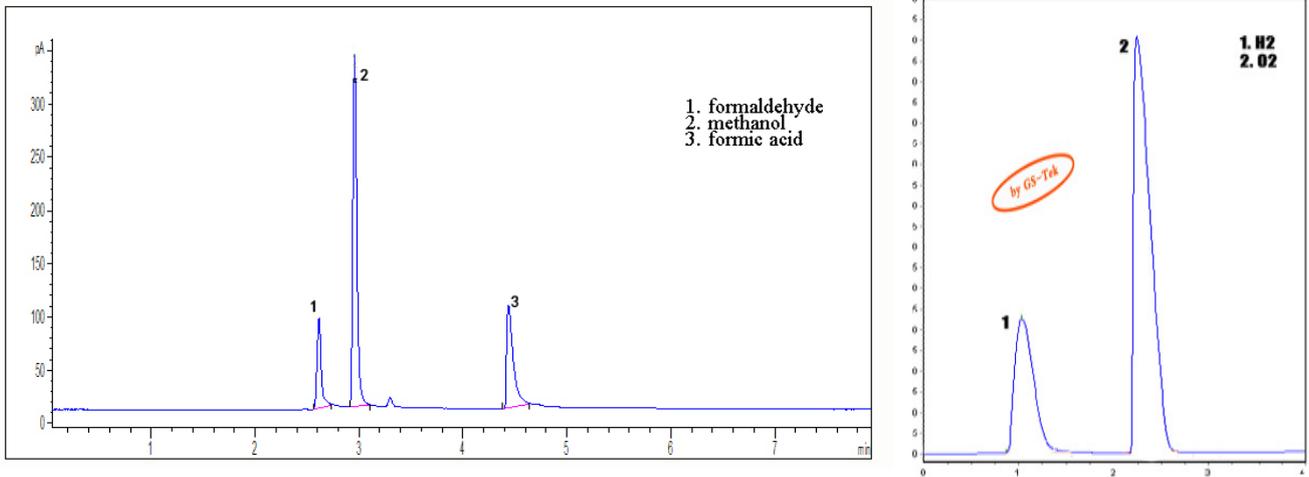


Typical chromatogram 1



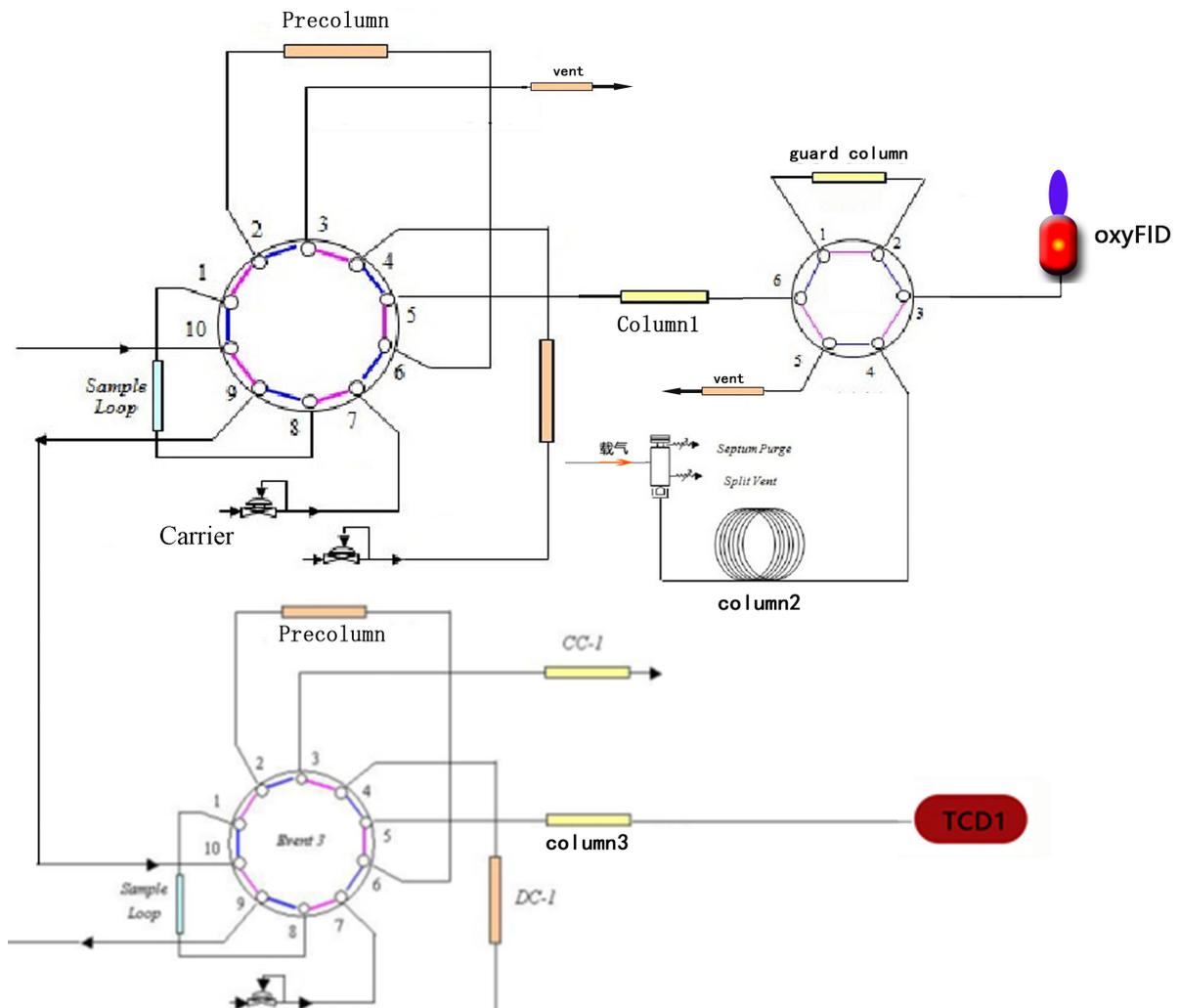
# Analyzer of Photocatalytic Reaction

Typical chromatogram:



Typical chromatogram 2

Typical flow diagram :





### About us :

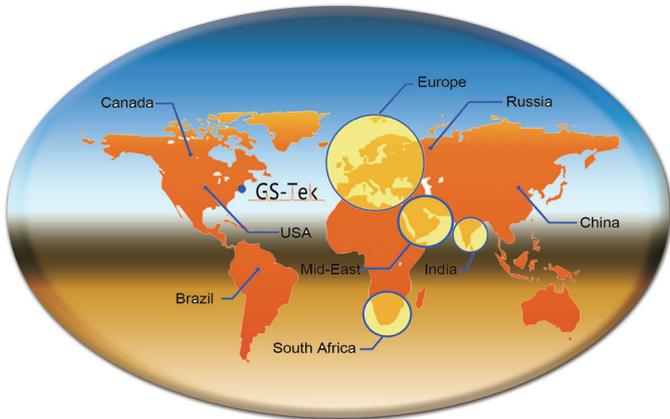
GS-Tek is a professional column and analyzer manufacturer, located in the beautiful state of Delaware, USA.  
GS-Tek produces high-quality gas and liquid chromatography columns with excellent performance and first-class quality.  
GS-Tek provides solutions and turnkey analyzers for customers and partners.  
GS-Tek has 40+ year practical experience and professional knowledge in the field of chromatography and application development.  
GS-Tek won the US President Award in 2014 and was listed in the 2015 US White House Trade Book.  
GS-Tek has a worldwide sales network and supply system, for more information, please visit our website: [www.gs-tek.com](http://www.gs-tek.com)

### GS-Tek Misson:

Provide products with excellent quality and performance to customers.  
Provide timely and effective technical support, competitive product price, and timely and fast product delivery to customers.  
We help customers work on their challenging applications and provide high-quality service and professional technology to win the trust and support of users.  
We believe that we not only sell products, but also want to become your trustworthy and reliable Partner.

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