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Press Release
for Immediate Release
September 15, 2015

Quantachrome Instruments Announces the Release of the New dyna**Sorb** BT ™ Dynamic Sorption Breakthrough Analyzer

SUMMARY

In the study of separation techniques and gas purification using adsorbents, measuring the heats of adsorption and adsorption capacity of the target gasses on the adsorbent can be a very good indication of an adsorbent's effectiveness in separating the gasses. However, competitive adsorption and kinetics can also influence the performance of an adsorbent.

The dyna**Sorb** BT™ allows the studying of competitive adsorption of two or more gasses simultaneously in dynamic conditions, where the kinetics are as important or more so than the thermodynamics.

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INDUSTRIES

- Energy
- Carbon
- Separation and Purification
- Zeolites
- MOF-Metal Organic Framework
- Gas Storage
- Material Science
- Chemical Engineering
- Environmental

KEY WORDS

- Breakthrough Curves
- Separation
- Technologies
- Gas Storage
- Gas Separation
- Material Science
- Technical Adsorbents
- Selectivity

INTRODUCTION

Technical adsorbents such as active carbons, zeolites, and silica gels are widely used in adsorptive separation processes on a multi-ton scale. The after-treatment of exhaust gasses, the removal of carbon dioxide in biogas plants, purification and fractionation of natural gas, air separation, respiratory protection and separation of isomers are just a few examples where adsorptive separation is employed as the most efficient and economic separation technique. A complete understanding of the complex processes taking place in a fixed bed reactor is the key to achieving the best separation performance.

The dyna**Sorb** BT™ series provides unique capabilities to investigate arbitrarily complex dynamic sorption processes in a uniquely safe and easy-to-use bench-top instrument. Technical adsorbents can be investigated under authentic process conditions in a broad temperature and pressure range with adjustable gas flow rates and well-defined gas compositions.

The dyna**Sorb** BT™ **can be used for the following measurements:**

- Determination of breakthrough curves
- Investigation of kinetic performance of adsorbents
- Investigation of co-adsorption and displacement phenomena
- Determination of sorption selectivity
- Reasonable downscaling of technical separation processes
- Dynamic adsorption and desorption experiments
- Determination of single- and multi-component adsorption data
- Investigation of heat profiles along the adsorber bed

Key features:

- Easy and intuitive PC-control
- Automated acquisition of sequential processes
- Countercurrent gas flow capability
- Automated regulation of the adsorber pressure up to 10 bar
- Up to 4 high precision mass flow controllers
- Automated built-in gas mixing
- Measurement of inlet and outlet gas composition
- Temperature control of inlet gas and adsorber
- Monitoring of pressure drop along the adsorber
- Built-in thermal conductivity detector (TCD)
- Optional gas analysis via interfaced Mass Spectrometer
- Built-in gas sensors for automatic shut down in case of leak

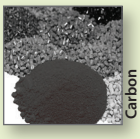
For more information contact: qc.sales@quantachrome.com

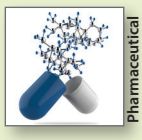
PRESS RELEASE


Gas Purification


Ceramics


Energy


Carbon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