better chemistry – faster

Subsieve AutoSizer

Powder sizing by air-permeability

Improved Performance — the same data. HEL's Subsieve AutoSizer (SAS) adds automated functions and electronically recorded and presented data, to an established particle sizing technique.

Developed as a direct and improved successor to the widely used Fisher Model 95 Sub-Sieve Sizer (FSSS), HEL have improved on the FSSS's performance and brought the technology to the 21st century by offering easy to use automated functions together with electronically recorded data.

The SAS is designed to - and successfully does - generate "Fisher number" results identical to that of its predecessor (the Fisher FSSS). It is not intended to be "better" or "more accurate" - its objective is to produce the same values. This is a crucial point as the FSSS is still used as a benchmark in many industries and historical data going back decades exists for comparison purposes.

Technical Specifications

Size Range:	**0.2 - 75 micron**
Porosity Range:	**0.2 - 0.9**
Compression Accuracy:	**<0.05 mm**
Power:	**1A**
External Dimensions:	**50cm (W) x 38cm (D) x 55cm (H)**
Weight:	**28kg**

Features & Benefits

Superior Software - Complete Control
HEL Software sets a world-wide standard for instrument operation, data acquisition and handling, reporting and systems integration.

Quick and Easy Set-up
Simple step by step set-up, easy to follow; ensuring that no parameters are over looked.

Easy Mode
A "Start" button runs the complete measurement to pre-selected requirements.

Real Time Data Display
Data can be viewed as it is acquired simplifying method development by ensuring that the user is never divorced from the measurement.

Report Generation
Company logos, typestyles and formats can be incorporated into printouts.

Security Features
Optional Password Protection ties samples to user ID's and protects plans from unauthorised changes.

http://www.helgroup.com/reactor-systems/crystallisation-particle-studies/

Subsieve AutoSizer

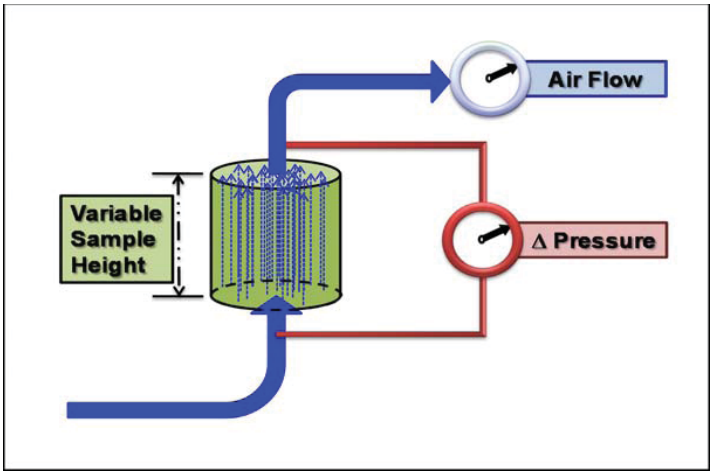
Crystallisation & Particle Sizing

What is air-permeability particle sizing ?

The air-permeability technique is well established for measurement of the average Specific Surfac Area (SSA) of a sample powder. The SSA measured by this technique has been found to be a useful parameter in industries as diverse as pharmaceutical, metal coatings, paints and even geological samples.

The SAS uses the principle of Pressure drop across a packed bed of powder.

By varying the Sample Height and hence the "porosity" of the bed, average Surface Area and hence Particle Size can be determined as a function of Pressure drop in accordance with the Carmen equation.

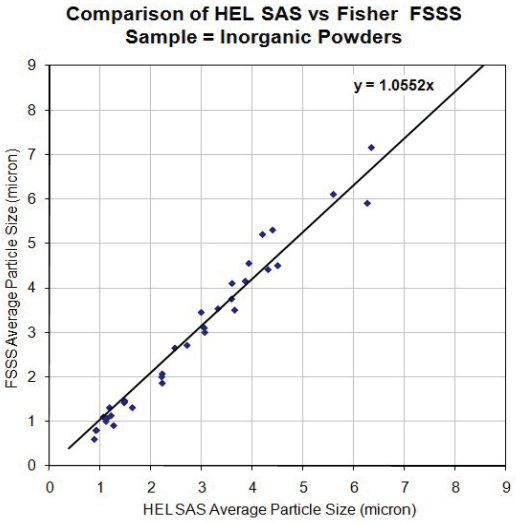


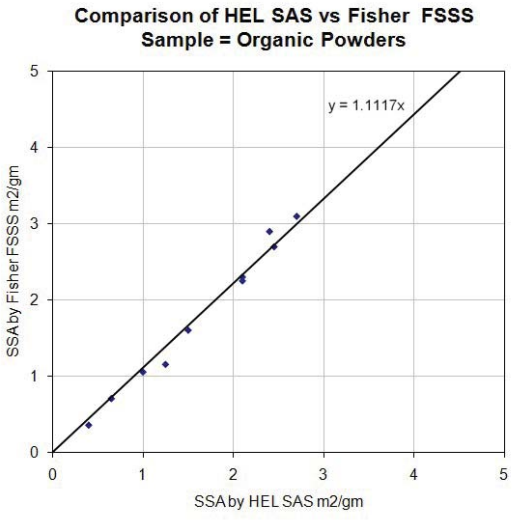
Direct comparison of SAS & FSSS results

Side-by-side trials have been carried out using both old and new samples, with cooperation from many different and experienced users of the FSSS. Typical results are shown in the graphs, where mean particle size data from the two instruments is compared for powders of different sizes. One plot is based on organic samples (mostly pharmaceuticals) and the other on is for inorganic (mainly tungsten) metal. In the latter, samples were contributed by many different companies around the world. There is exceptional correlation between the two sets of data.

Another more extensive and independent study using organic samples by Astrazenca in England, has come to the same conclusion, after using it at various sites and by different individuals.

Repetitive testing of the same sample, to give a measure of reproducibility (precision) has also been reported by the same authors, again using the two devices side-by-side to give the specific surface area. A similar study by Michael Salmen of Osram in Germany, came to the same conclusion while working on tungsten samples.





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