nucomat

USED OIL SAMPLE SPLITTER

AUTOMATED SPLITTING OF OIL SAMPLES INTO DIFFERENT ALIQUOTS

INTRODUCTION

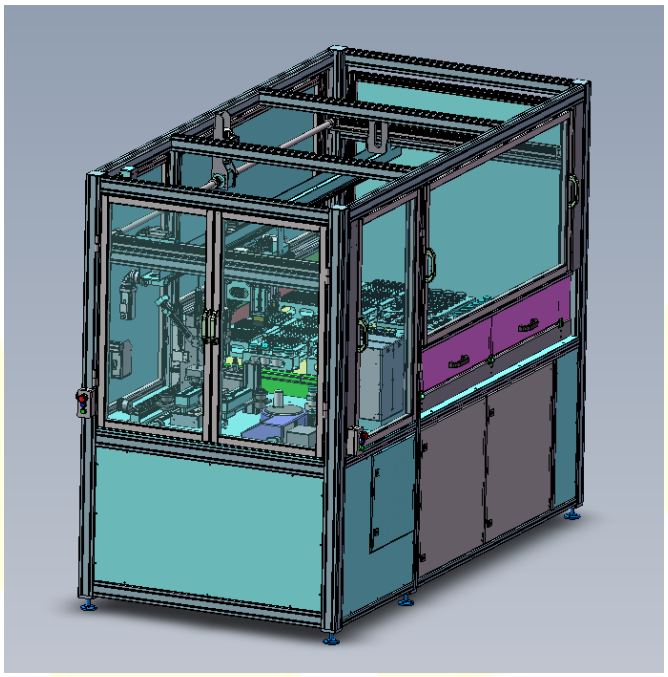
The analysis of used lubrication and engine oils is commonplace in many industries such as aerospace, marine and heavy machinery. However, the challenge for analytical laboratories is to provide an efficient service with the required **speed and quality**. This speed can be realized in several ways, such as (1) the reduction in sample preparation time through automation, (2) speed of sample analysis, and (3) improvement of the overall laboratory workflow through the implementation of a laboratory information management system (LIMS).

Traditional sample preparation can be a real bottle-neck in a fast-turnaround laboratory. Additionally, once the samples are ready to be analyzed, a sample sequence must be created on a variety of key oil analytical tools, ranging from ICP, viscosity, etc. Given the higher sample loads in today's process laboratories, scientists are looking for end-to-end solutions that improve the overall efficiency of the laboratory workflow and ensure quality data is reported to customers.

USED OIL SAMPLE SPLITTER

The automated Used Oil Sample Splitter is intended for implementation of the standard method ASTM D5185 «Determination of Additive Elements, Wear Metals, and Contaminants in Used Lubricating Oils» and transfers used oil from a mother bottle to 7 daughter vials

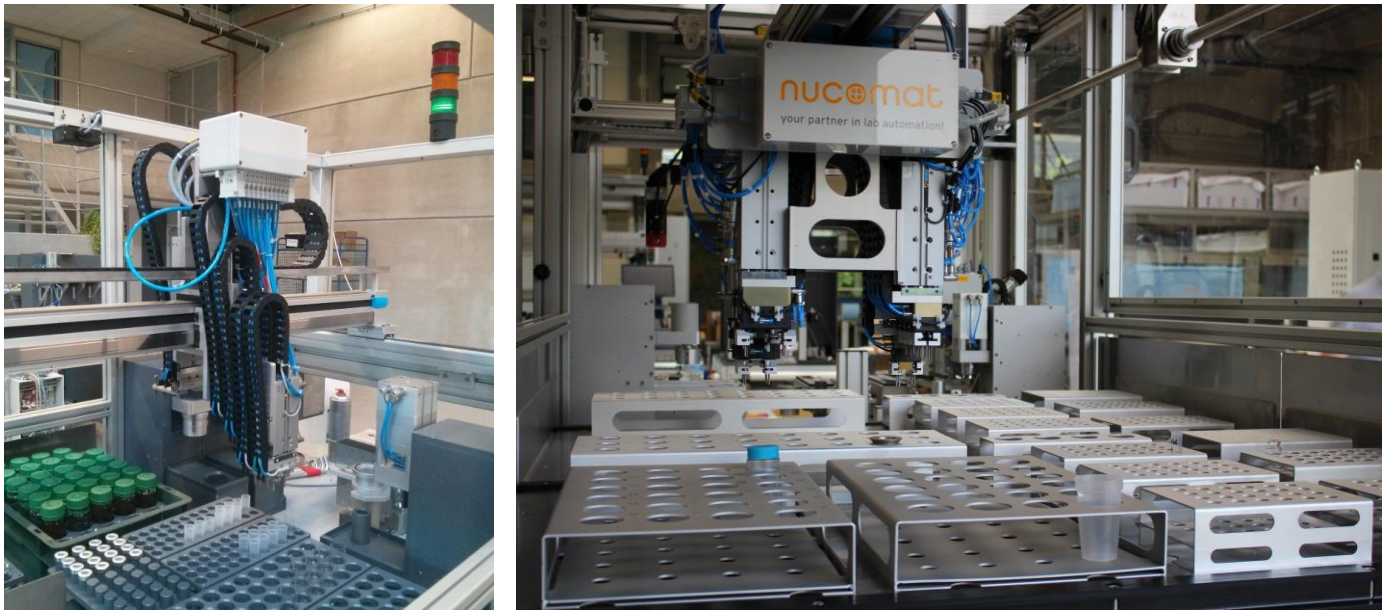
- 2 viscosity tubes
- IR tube
- ICP tube
- Karl Fischer vial
- TBN/TAN recipient
- Recipient for flash point analysis



Technical design of used oil sample splitter.

Additionally, a PQ analyser and digital camera are integrated. The transferred oil can also be diluted with solvent. The greatest advantages of this process being automated are the reduction of monotonous work for the laboratory staff and the increased capacity of the lab. The system is constructed to analyse up to 40 samples per hour, and to run up to 80 samples without the need of laboratory staff being present.

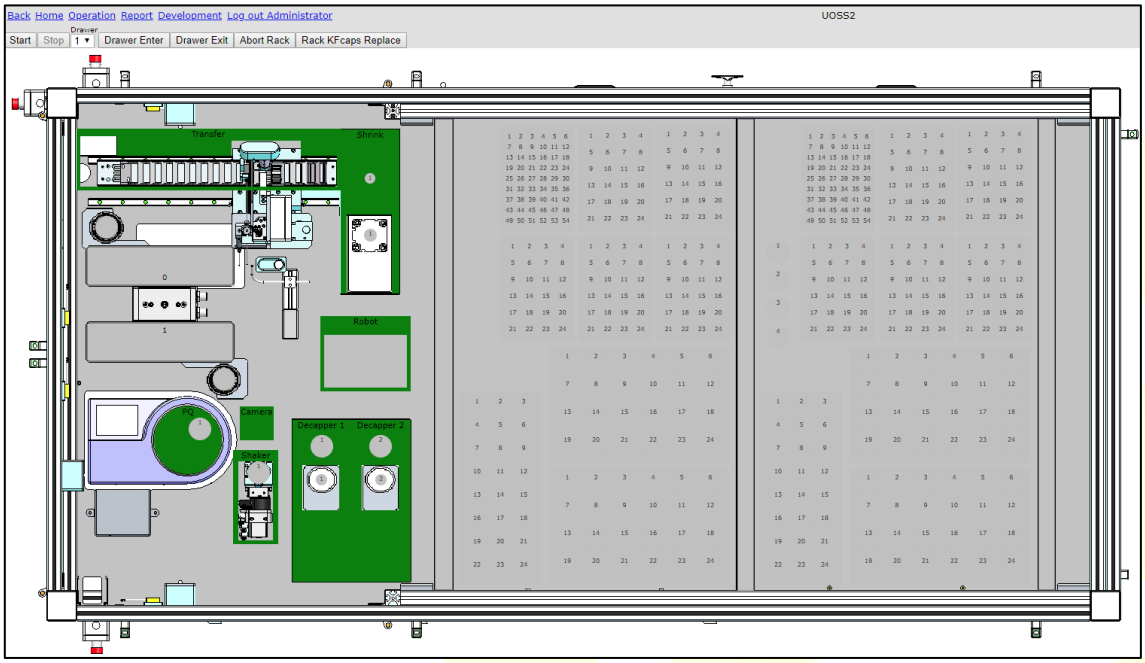
The system is able to dispense high and low viscous samples in a clean and very precise way, much better than a traditional liquid handler would perform. The system is designed to run in a 24/7 regime. Finally, the system can be integrated in client's LIMS system to achieve the shortest sample turnaround time and maximum sample throughput, while ensuring the highest standards of data integrity and overall quality.



Pictures of Used Oil Sample Splitter system.

CENTRAL WEB BASED SOFTWARE

The platform is controlled by **ROBIN**, a real time event driven **scheduling software** developed by Nucomat. All samples are electronically **tracked** from registration to result and relevant actions are logged to a database. **Input and reporting** functionality is available with various file formats: text files, RTF, Excel, XML, and reports in PDF. LIMS upfront and downstream functionality is available with various file formats. Additionally, sample methods can be easily modified in a user-friendly method editor.



Webbased ROBIN software.

BENEFITS FOR CUSTOMERS

The main advantages of this automated system are:

- reduction of monotonous work for the laboratory staff
- increased capacity of the lab
- full traceability and accuracy of dispensing
- no use of disposable tips for oil dispensing

TAILOR-MADE SOLUTIONS

Nucomat builds turnkey automated systems based on your requirements (capacity, type of recipients and aliquots, ...). Instruments from other manufacturers can also be incorporated in the system in order to expand the system specifications.

VIDEO

https://www.youtube.com/watch?v=k5sF-k-EDLw
https://www.youtube.com/watch?v=U-KBQLiedX4

CONTACT

Spieveldstraat 45
Industriepark E17 / 3265
B - 9160 Lokeren
Belgium
+32 9 395 11 11
www.nucomat.com
info@nucomat.com

nucomat
your partner in lab automation!