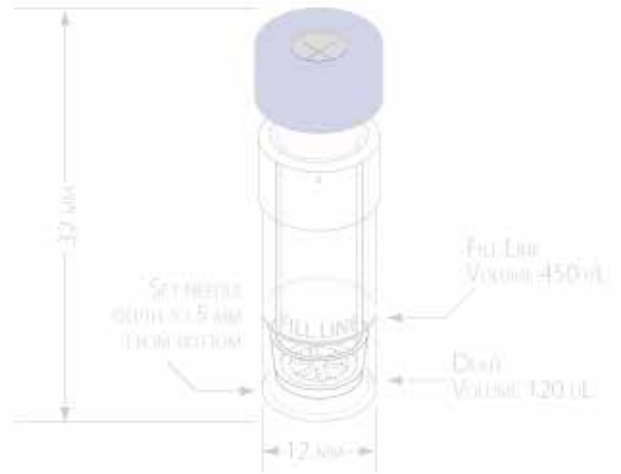
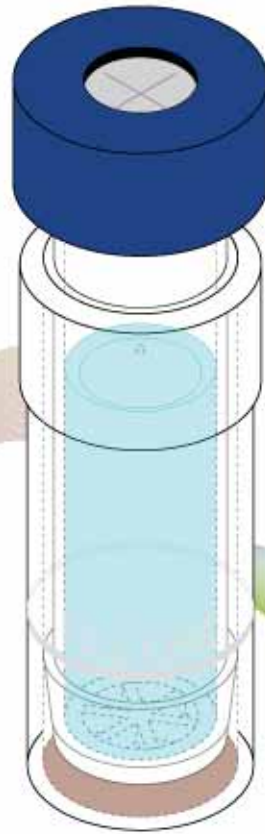


## SIMPLE PROTECTION, FILTER VIALS A SINGLE STEP SOLUTION TO OPEN ACCESS PROBLEMS



**PART NUMBERS:**

35540-200 (200 per pack)

35540-500 (500 per case)

Sam Ellis<sup>1</sup>, James Doom<sup>2</sup>, John Tyhonas<sup>3</sup>

1 Thomson Instrument Company, 2 Pfizer, 3 Takeda

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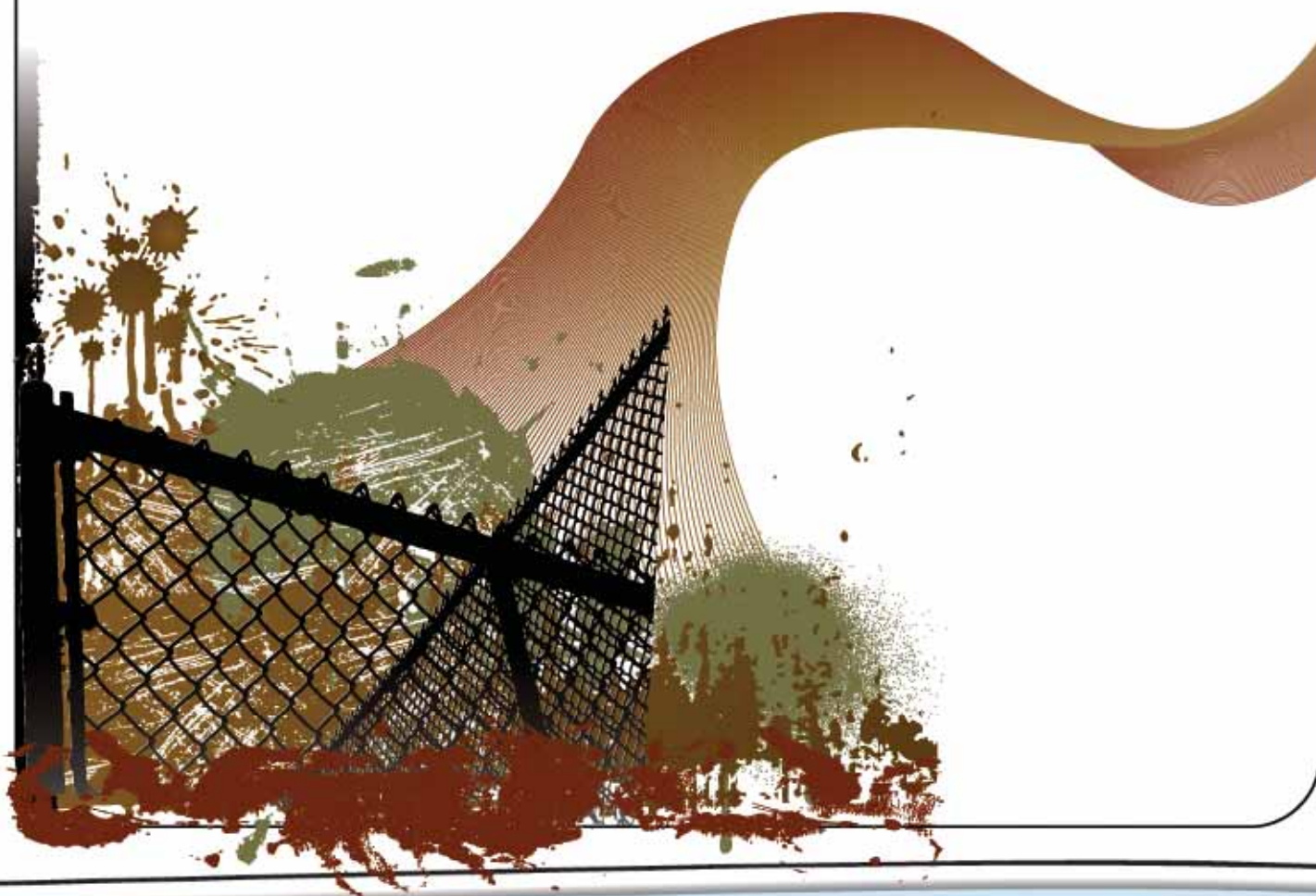
# Abstract

Open Access equipment from HPLC's, GC/MS, LC/MS, UPLC and other systems has revolutionized analytical chemistry by allowing biologists and chemists to do fast, cheap, and easy separations of complex mixtures. The real problem comes into play with the mixtures containing metals, biological matrices, and other debris blocking the equipment. Thomson Instrument Company in conjunction with testing from Takeda San Diego (UPLC), Exelixis (San Diego) GC/MS, HPLC, LC/MS, and Pfizer (St. Louis 20 Open Access systems) has developed a simple SINGLE StEP Filter Vial (patent pending). The Filter Vial has allowed for the filtration process to become a SINGLE StEP in the autosampler vial itself. The product eliminates the need for a syringe, syringe filter, HPLC vial, and HPLC Cap. The Filter Vial is a simple low cost upfront tool to saving time, expensive equipment, and maintenance headaches.

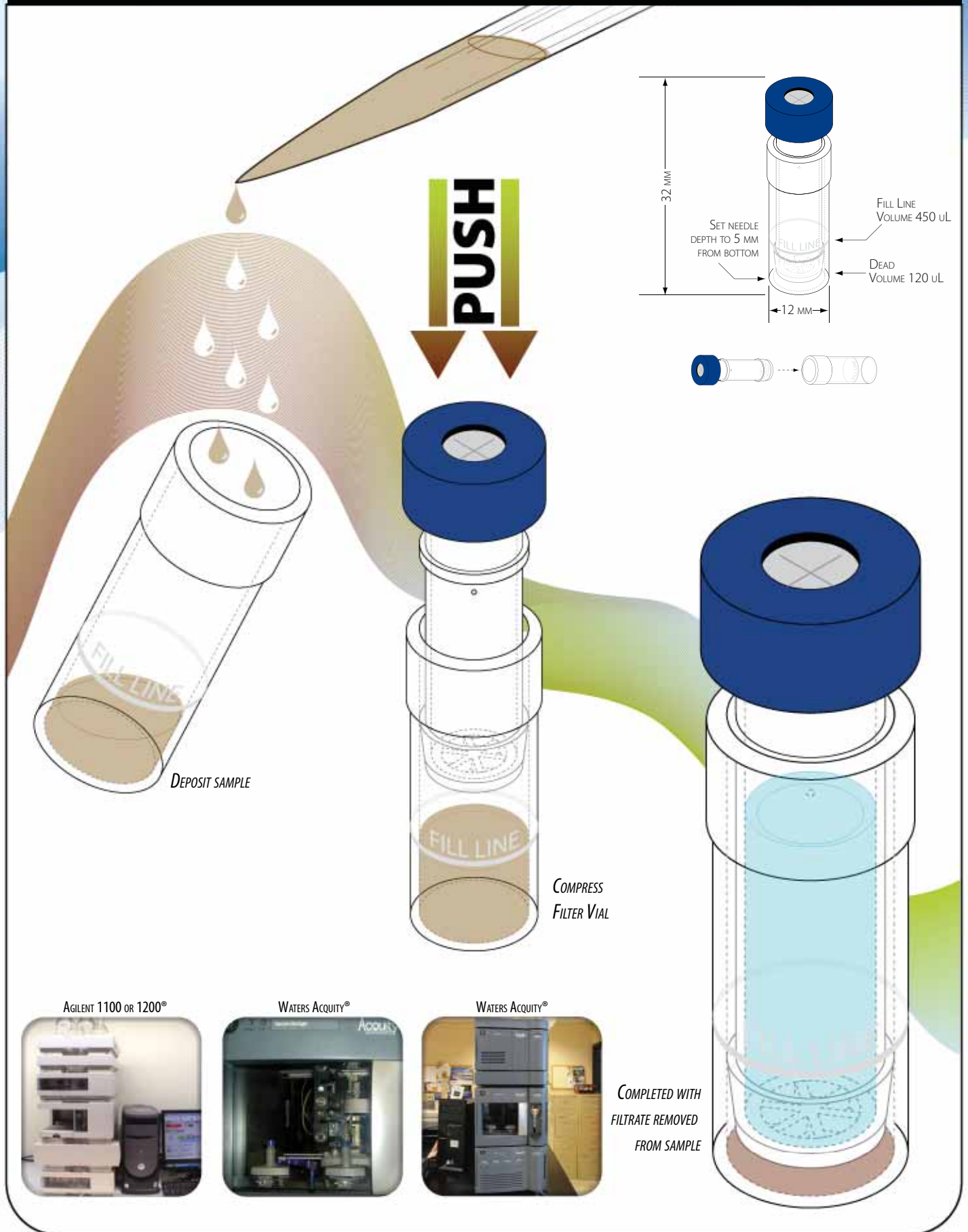
# Introduction

For analytical chemists and other scientists filtration has come as a chore not as a simple process. As catalysts are regularly used in chemical reactions their remnants regularly haunt the machines used to test the reactions happening. With over 20 different metals to choose from, and Palladium used for hydrogenations, metals are a common cause of machine clogging. Protein samples also need to be crashed out before placing them on the HPLC. Many people have traditionally done off line crash procedures. The Thomson Filter Vials can do this easily by mixing the Acetonitrile and Aqueous solution in the bottom chamber, and then allowing the filter to push down trapping the protein, and letting the clean sample come through for analysis.

Thomson SINGLE StEP Filter Vials (patent pending) are designed to speed up sample prep and analysis. The plunger filter with 0.45 $\mu$ m Teflon membrane nestles into the vial while simultaneously filtering and readying the sample for any Autosampler. This is a SINGLE StEP process that minimizes any loss of sample. No multiple step transfers needed. Pre-slit caps ensure a no-hassle, clean aliquot withdrawal. No more breakage of expensive needles, coring problems on the HPLC or Mass Spec. Thomson SINGLE StEP Filter Vials are compatible with most standard Autosamplers; such as Agilent® and Waters®. The ease of use will make the SINGLE StEP Filter Vials indispensable in all laboratories.



# Results



# Conclusion

A real time solution to a dwindling number of resources available to Analytical groups throughout our Industry is the use of Thomson Filter Vials . Most people who take care of open access machinery have this as one of ten different projects they are assigned. Pfizer St. Louis showed data over 10 weeks. Prior to using the Filter vials they had 1-2 systems at minimum down per week. The incorporation of Filter Vials for 15 weeks has lessened their repairs to 0 systems and 100% working capacity. As a result no columns failing, no valves failing, no tubing needing to be changed, or other parts needing to be serviced. People don't realize that a service contract can run between \$15,000.00-\$30,000.00 per instrument, not including all parts. The most expensive part on an API Mass Spec can run up to \$25,000.00. Service contracts are based on the prior years amount of service calls. Systems not covered by service range in price of between \$200.00-\$350.00 per hour of service, and will not include parts and drive time depending on locations. The most expensive part on an API Mass Spec. can run up to \$25,000.00. Repairs and downtime of equipment are costly. A simple upfront and easy solution is the incorporation of Thomson Filter Vials.

# Materials and Methods

The Thomson SINGLE StEP Filter Vials 35540-200 (200 per pack) or 35540-500 (500 per case) (patent pending) are comprised of three parts: Pre-slit cap, plunger filter with 0.45 $\mu$ M Teflon membrane and the outside shell vial that holds 450 $\mu$ L.



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1 Thomson Instrument Company, 2 Pfizer, 3 Takeda

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