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Canada**Introduction**

Since *All I Really Need to Know I Learned in Kindergarten* first appeared in 1988, its simple, profound wisdom has inspired the world. Among its easily digested messages are a few gems that research scientists would do well to employ in their labs every day:

- Share everything
- Play fair
- Put things back where you found them
- CLEAN UP YOUR OWN MESS
- Don't take things that aren't yours

Makes sense, right? Following these simple steps makes even more sense after learning that many scientists and technicians have been found spending a disproportionate amount of their time doing things that add little or no value to their research. It might be as simple as attempting to manage their own lab supplies or filling out supply orders that are better completed by someone else. Maybe it just has to do with finding those supplies to begin with in a less-than-organized lab environment. Even more time is wasted having to walk from one lab to another because of the lack of any real collaborative culture that allows for something as simple as sharing supplies. It is not so easy to “follow the rules” when everyone is focused on their own specific objectives. Whatever the cause, the result is the same: Applying some basic lessons we all learned early in life more broadly across the laboratory as a whole would go a long way to improve lab performance and productivity¹. Let's look at something all labs have in common – consumables – as an example.

A Case for Managing Consumables

If your lab is like most others involved in research, it spends a good share of its annual budget on consumables – everything from glassware, disposables, safety gear, gases, reagents, and media, to mention just a few. Staying on top of inventory for these items can pose a real challenge, especially when manual reconciliation processes are used to keep track of consumables from hundreds of different vendors with products located in multiple storage areas. That often leads to inaccurate reporting, frequent out-of-stock scenarios, supply hoarding among staffers, security and regulatory

breaches, and a huge drain on resources in terms of time, money, and the wasted efforts of scientists trying to manage supply chain issues instead of conducting research².

At the U.S. Environmental Protection Agency (EPA), for example, its 30-plus labs spend more than \$7 million a year on supplies and consumables from over 800 vendors³. To optimize its overall lab performance, the EPA launched a strategic sourcing initiative in 2007 targeting consumables' usage as a means to reduce the Agency's costs without affecting lab efficiency or effectiveness. That has led to the creation of the Laboratory Supplies Commodity Team to oversee all aspects of planning, implementation, and logistical actions needed to implement strategic sourcing throughout the EPA. And the results have already generated “measurable longstanding improvements in laboratory effectiveness and efficiency.” Rather than buy supplies using local purchase orders and even personal credit cards, for example, government labs now use blanket purchase agreements that require suppliers to meet all federal socio-economic standards while also saving the EPA an average of 20 percent on lab consumables. Lessons learned...a little high level oversight can go a long, long way⁴.

In another instance of attempting to better understand the management of lab consumables, Tata Memorial Hospital in Mumbai, India, undertook a study in 2010 to ascertain the true costs of diagnostic testing performed at the large, government-run facility that treats some 43,000 cancer patients a year. In adopting a cost accounting approach to the various tests conducted at the hospital, the study found the facility's patient fee structure underestimated the real costs of the tests, largely due to the high price of consumables and the lack of any centralized control over their purchase and management⁵.

The OneSource Solution

As a lab leader facing similar issues and a tight budget you are probably asking yourself one simple question: "How can I improve my lab's consumables management process? In a word, it is OneSource®.

Using the same rationalization that drove the successful EPA initiative and hundreds more like it, PerkinElmer's OneSource Scientific Services group leverages years of lab know-how, state-of-the-art analytics and informatics, and its boots-on-the-ground experience to tackle consumable management issues at their source. Employing its Efficiency by Design model, OneSource helps labs to improve operations. Three simple action items are used to implement best practices for consumables management:

Standardize

- Consolidate the variety of consumable formats
- Streamline consumable inventory
- Minimize stock locations
- Single solution for all types of lab inventory: biologics (e.g. cell lines, DNA), chemicals, consumables, and other assets
- Flexible laboratory with defined bench and workstation layouts
- Point of use consumables
- Shared ownership
- Minimize scientist motion

Automate

- Integrated Informatics
- Real-time access to information
- Paperless lab
- Automated ordering and reordering processes
- Reporting capabilities to gain insight and visibility

Specialize

- Insourced lab support services
- Just-in-time availability
- Continual and transparent restocking process

It is all part of OneSource's holistic approach to managing scientific activity at your lab with its own embedded experts working as part of your integrated team. The OneSource model lets your lab experts focus on the science. And remember one more bit of wisdom from the Kindergarten credo: "When you go out into the world, watch out for traffic, hold hands, and stick together." Because when you partner with OneSource, we mean to do just that by supporting your lab with the best level of service in the industry.

For more information on OneSource and its end-to-end scientific workflow solutions, contact your local OneSource sales representative or visit: www.perkinelmer.com/efficiency.

References

1. Robert Fulghum, *All I Really Need To Know I Learned in Kindergarten* (Ivy Books, 1989). See also, Ron Wince, "Improving Lab Efficiency," *Advanced for Administrators of the Laboratory* (February 25, 2010). See also, Mark Beards, Michael Edwards and Mubasher Sheikh, "The Secret of High Productivity in the Research Lab," in *McKinsey & Company Pharma R&D Compendium 2009*
2. Keith Hoffman, "Improving Efficiency in the Research Lab with RFID Smart Rooms" <http://www.terosolutions.com/wp-content/uploads/2013/06/ImproveEfficiencyRFIDSmartRoom.pdf>
3. U.S. Environmental Protection Agency, *Commonsense Actions and Best Practices that Improve Laboratory Efficiency and Effectiveness* (October 2008), p. 29.
4. *Ibid*, p. 28 – 30.
5. Sumeet Gujral, et. al., "Activity-based Costing Methodology As Tool for Costing in Hematopathology Laboratory," *Indian Journal of Pathology and Microbiology* (2010), Vol. 53, Issue 1, pp. 68 – 74.