

## Introduction

- Small businesses often purchase consumer products in local stores for common tasks such as cleaning.
- Presence of irritant chemicals in these products and their association with occupational asthma have increased concerns about cleaning product chemical use.<sup>1,2</sup>
- Safety data sheets (SDSs) for these consumer cleaning products are usually not provided at point of purchase, requiring end users to find the SDS on their own.
- If SDSs are found, information can be limited due to different rules for consumer product ingredients compared to industrial chemicals.<sup>3</sup>
- Ultimately, these challenges can hinder hazard communication in small businesses, where having a designated EHS professional is unlikely.<sup>4</sup>

## Objective

To evaluate the availability and content of safety data sheets for consumer cleaning products in local stores.

## Methods

### Inventory of Products and SDSs:

- Consumer cleaning product sprays currently available in a local grocery and retail store were inventoried, and SDSs were collected on the manufacturer's website or by email.

### Information Collected:

- Was an SDS found for the product?
- Where was the SDS located?
- SDS date
- Chemical information provided in section 3
- Section 8 data on occupational exposure limits (OELs)

### Defining Data Categories:

- SDSs with a statement indicating that contents were not hazardous or not required to disclose ingredients were counted together
- OEL information was separated by SDS country designation. If an SDS was found in English with no designation, it was grouped with United States SDSs.

## Results

Information for 108 products are shown in Table 1 below:

**Table 1. Consumer Cleaning Products in Two Cincinnati, OH Stores**

	Brands	Products
Number of products found	36	108
Number with SDS sheets available on company website	24 (67%)	75 (69%)
Number with SDS sheets available from website, email request, or 3 <sup>rd</sup> party	30 (83%)	89 (82%)
Number with chemicals listed in Section 3		67 (75%)
Number with statements in lieu of chemicals in Section 3		22 (25%)
Number referencing OELs in Section 8		36 (40%)
Number with International SDS sheets	13 (36%)	37 (34%)

## Challenges

- Of the 108 products found, ~20% did not have SDSs available. How should this be addressed?
- For products with SDSs, ~25% indicated no hazardous chemicals present or above 1% concentration. Does this mean it is safe?
- About a third of the products had OELs from agencies outside of the US, including those for Canada (CAN), Mexico, Europe/UK, and Singapore (SING) (Table 2). When multiple OELs are listed, which should guide risk management?

**Table 2. Summary of OEL Information in SDS Section 8**

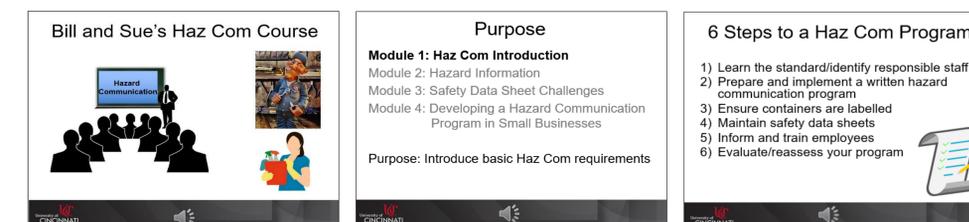
Number of Products with US OELs (US SDS)	ACGIH TLV: 34 NIOSH REL: 28	ACGIH BEI: 1 OSHA PEL: 31
Other OEL information on Safety Data Sheets (US SDS)	AIHA WEEL: 2 US/CAN/MEX: 3	Supplier OEL: 2
Number of Products with International SDSs (in English)	Canada: 35 Singapore: 5	Europe-UK: 4
OELs referenced in international SDSs	ACGIH TLV: 19 OSHA PEL: 6 CAN Provinces: 1 SING PELTS: 2 UK WEL: 4	NIOSH REL: 7 AIHA WEEL: 1 Supplier OEL: 1 TEEL: 5

## Specific Examples

- SDS listing "Proprietary Ingredient" with an OEL of 200 ppm. Without identification, how will you sample for this?
- Extreme example for multiple OELs shown on one SDS: 52 OELs listed in Section 8 for 3 chemicals. Will the end user be able to interpret this information?

## Resources for Small Business

- Four short (~10 min) training modules were created to address these challenges. More work may be needed to assist and inform small businesses.



**Bill and Sue's Haz Com Course**

**Purpose**

**Module 1: Haz Com Introduction**  
Module 2: Hazard Information  
Module 3: Safety Data Sheet Challenges  
Module 4: Developing a Hazard Communication Program in Small Businesses

Purpose: Introduce basic Haz Com requirements

**6 Steps to a Haz Com Program**

- 1) Learn the standard/identify responsible staff
- 2) Prepare and implement a written hazard communication program
- 3) Ensure containers are labelled
- 4) Maintain safety data sheets
- 5) Inform and train employees
- 6) Evaluate/reassess your program

## Conclusion

- Small businesses face several hazard communication challenges with consumer product SDSs that ultimately limit their ability to inform users about chemical hazards.
- Efforts to address these challenges should continue.

## References

- <sup>1</sup>Le Moual N, Varraso R, Siroux V, Dumas O, Nadif R, Pin I, et al. Domestic use of cleaning sprays and asthma activity in females. *Eur Respir J*. 2012;40:1381-9.
- <sup>2</sup>Zock JP, Plana E, Jarvis D, Anto JM, Kromhout H, Kennedy SM, et al. The use of household cleaning sprays and adult asthma: an international longitudinal study. *Am J Respir Crit Care Med*. 2007;176:735-41.
- <sup>3</sup>Nicol AM, Hurrell AC, Wahyuni D, McDowall W, Chu W. Accuracy, Comprehensibility, and Use of Material Safety Data Sheets: A review. *American Journal of Industrial Medicine* 2008;51: 861-876.
- <sup>4</sup>Schenk L, Antonsson AB. Implementation of the chemicals regulation REACH-Exploring the impact on occupational health and safety management among Swedish downstream users. *Safety Science* 2015;80:233-242.

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