

## **250620 Meeting Minutes**

Attendees: Kate Malecek, Linda Mondaca, Alyssa Player, Jaasiel Alvarez, Annie Lam, Dennis Ko, Tasha Cammidge, Luisa Segovia, James Linton, Maddy Adolph, Vijaya Kumar, Xiaohui Li, Emily Shi, Bhakti Ahir Ahir, Pablo Bravo.

- This month, [RSVP here](#) to order food from [Porto's](#)! [In your RSVP](#), please type in the drink you would like and vote on a pastry to order. **The deadline for submitting your food order is Thursday 9am.** I will also bring a kettle so we can boil hot water and I will bring some yummy hot chocolate packets and tea bags for folks to enjoy! If you prefer, BYOT. **Please remember to bring your laptops.** For bonus sustainability: folks can bring their own cups and/or utensils and/or plates as an alternative to our usual compostable ones!

Will update [Restaurant Guide](#) and our [Coffee, Breakfast, and Dessert Guide](#)

### Introductions ...

#### [Million Advocates for Sustainable Science](#) Petition

- International Institute for Sustainable Laboratories (I2SL) along with My Green Lab are petitioning to change funding granting agency policy to promote sustainable research
- By signing the letter you can help transform how science funding organizations set expectations for efficiency, resiliency, and sustainability in the way scientific research is conducted
- Reached 1100+ signatures!

### Green Labs Monthly Tip: Sustainable Procurement

1. Don't just accept the norm! Contact your vendors to let them know a specific product is creating a lot of waste, and see if they have alternatives.
  - a) Can reveal products with less packaging, reusable options, or even take-back programs you didn't know existed!
  - b) Also signals to vendors that the demand for sustainable alternatives and solutions exists. Over time, these conversations can drive industry-wide changes that make lower-waste options available to everyone.
2. Check with other vendors to see if they have an alternative that creates less waste.
  - a) At the very least, you can send this information over to your normal vendor and bargain for a discount or show that a competitor is doing better.
3. If replacing an item/equipment, see if there are alternatives that require fewer consumables.
4. See if there are reagents you can make yourself that will cost less and reduce waste.
5. Beware "greenwashing"! Don't be afraid to follow up with vendors and put them on the spot – no one wants damage to their reputations!
  - a) Deceptive marketing practice that misrepresents the environmental benefits of a product or service that makes it appear more eco-friendly than they actually are.
  - b) Do your research! There is often a lack of transparency, or use of vague language, focus on only one aspect and ignoring others, citing features that are already legally required, misleading labels, or false "accreditations" that can all be a sign of greenwashing.
  - c) Verify certifications – do they come from reputable organizations?
  - d) Research the company and see what their overall environmental practices and policies are.
  - e) Be skeptical and do your own research!

6. Check out the resources on our Clean Up Event page on specific topics to help keep your lab organized and efficient, including [recycling signage](#), [chemical inventory spreadsheets](#), [mock order sheets](#), or [sustainable products list](#).
7. We are also making available [digitally fillable inventory sheets](#) or [blank printable inventory sheets](#) for freezer inventories. We recommend laminating these sheets or putting them in a sleeve protector to keep them clean and legible.
8. You can search for or divest lab items such as surplus supplies, chemicals, equipment, furniture, and more with our new (beta) [Green Labs Marketplace!](#)
9. Check out our [Lab Spring Clean Event](#) webpage for more tips and tricks to keeping your lab safe and clutter-free!

#### Updates

- **26 Certified labs!! WHOOOOO**
  - o Please get CERTIFIED TODAY! To get certified, finish the easy, 30-minute [Green Labs Certification](#) and submit it to [sustainability@caltech.edu](mailto:sustainability@caltech.edu).
  - o Certified Labs-exclusive event planned for April!

#### Updates – Pilot Programs

- FUNDING IS AVAILABLE – SEE PILOT PROGRAMS WEBSITE
- Lomi Composter Pilot (8 on campus): 521 kg of dirt (2603 kg (or 5738 lbs!) food waste)
  - Donation of a whole Lomi! Set it up in the Facilities building – our first OFFICE Lomi!
- Pipette Tip Box Recycling: 2,775 pounds (5842 gallons or 22,113+ liters) of plastic waste diverted EXPANDING PROGRAM!
- -70°C/-80°C Comparison Pilot: 5 labs involved, collaborating with NIH and UVA + Norway labs collaboration
- PolyCarbin: Initial order replaced 31 pounds of crude oil and reduced 122 pounds of CO2E via sustainable procurement
  - AP: sent off another box of coloured plastic, 34 lbs of plastic recycled, 12,793 water conserved, 70 lbs carbon emissions reduced
- Styrofoam recycling pilot
  - DIVERTED 25 DUMPTSTERS total!!
  - [Sign the petition!](#)
  - [Technical bulletin from I2SL](#)
  - [LCA of Styrofoam](#)
  - [How to do LCAs](#)
- Fume hood sensor project
  - Around \$1,300 savings per fume hood on average!! GG writing up now for our 21 fume hoods
- **Grenova pipette tip washer:** looking into funding options!
  - [Survey](#) for pipette tip types, cost per year, etc. to gather data
  - Looking into funding options
- [Follow us on Instagram](#) →

#### Updates – Past Events

- June 4– Styrofoam recycling day

- Changed location of Chen dropoff to 3<sup>rd</sup> floor
- [Clean Up Event](#) January – April 2025
  - Updated website! 😊
- New Marketplace webpage!
  - Almost 100 entries...
- BBE Spring Town Hall presentation – May 9
- Lab manager meeting presentation May 16
- Presenting to AALAC group June 16

#### Updates – Future Events

- Book a day for the Clean Up Event Lunch??
- Re-Engagement Certified Labs Competition Begins in July/August!
- International Freezer Challenge Jan. – July 1 2025
  - 3 labs are participating this year!!
- Hosting SURF summer students – Dennis Ko
  - Plug load project
  - Fume hood project
  - Volunteers?
- 2025 [Freezer Challenge](#)– next year make a higher priority!
  - January 1 – July 1
  - Labs compete to improve freezer efficiency, sample accessibility, reduced risks, cost-savings, and energy-savings for their lab's cold storage!
  - Fun, free program
  - Scored on different categories (like defrosting freezers or inventorying)
  - Awards given at I2SL for the winners!
  - Will provide internal prizes, AND a popsicle party in the summer!

#### Meeting presentation topics signup

- SURF students July 11
- August 8?

#### Presentation on ACT Labels - Kate Malecek! The Act Label for Lab Products

– [Slides](#) are posted as are the [ACT Label launch webinar](#) slides

- The Act Label for Lab Products
  - A reporting system for lab consumables and equipment published by My Green Labs
  - Stands for: Accountability, Consistency, and Transparency
  - Today: an introduction to third party sustainability labels and preview of updates to come
- The environmental impact of lab research is due to our infrastructure and our consumer choices
  - Spaces (HVAC, water, electricity)
  - Waste (plastic, chemical, biohazardous)
  - Equipment (manufacture, operation, and materials at end of life)
  - Consumables (manufacture, materials at end of life)
  - What sources of information can I consult about a lab consumable's environmental impact?
    - How is this information collected? Is it accurate?
    - Do my choices make a difference?

- Vendor-shared resources can include simple signage, or more in-depth comparisons, or just a “green leaf”
- ACT label has 1700+ products from 45 companies
  - Uses third party verification to develop product impact factors (scores)
  - Include:
    - Regional labels that capture differences in shipping and end of life impacts for each region (US, EU, UK) in which the product is sold.
    - Manufacturing
    - User Impact
    - End of Life
    - Innovation
    - Environmental impact score (a lower number indicates a lower overall environmental impact)
  - Can delve more into each company’s answers and understand more thoroughly why scores were given the way they were
  - KM: But, what does “8.4” mean? Hard to know even with the above answers what the values mean and how to compare them
  - VK: how do we use the EIS to determine which one to buy if it is metricless?
    - KM: very hard to compare, what does it “mean”? I don’t know. Is 34 worse than 28? We should also be consulting with local deals with vendors, recycling programs at Caltech etc. when making decisions.
- Verico SCE (Sustainable Carbon Emissions) is the third party verification service for the Act Labels
  - UK has a better website, the US one is very generic, as EU and Australia have more laws increasing the compliance of certain standards
  - Can we trust them?
  - They certify a growing list of standards and products (household, health products, public spaces)
  - Verico has an extensive audit process for products
  - Transparency? Independence? Accuracy?
  - What’s the catch? How is this financially tenable?
- Comparing 5 similar products (in this case pipette tips)
  - What accounts for score differences in these product formats from the same manufacturer?
    - Product content
    - Product Lifetime
    - End of Life
  - Do they pass the sniff test? Does it really “FEEL” different between the products when they are actually in your hands? Do they use a lot of shrink wrap?
- Comparing other products like equipment
  - If they say they have takeback programs, are people actually using them (can we verify this)? It is on the USER to know how to return the items, so this metric may be self-reported and unverifiable (or unused as users don’t know about it). Then, if users are recycling in-house, say, for a freezer, is that any better than the take-back recycling program?
- Observations when using the current ACT label database
  1. Small differences in score are not always so clearly explained to allow for a definitive “winner”

- Several areas could receive more detail
  - Shipping methods
  - Recycled content
  - Company practices
- 2. Your immediate lab context may result in variable impacts
  - Context includes
    - Available recycling programs
    - Shipping distances
    - Feasibility of pooled ordering

There is still plenty of cause to do your own research and assessment!

But what more could the ACT label do to be more useful? More impactful?

- Global regulations on sustainability claims are pretty weak in the US, but Australia, Canada, and the EU all have stronger laws that protect consumers from fraud, and ACT label good way to do this
- 2.0 version coming out that includes even more data, more focused on externalities (like scope 3 emissions)
  - Act Label 2.0 updates to score card – a 100 point inspection of lab products
  - Developed now, set to be released in Q3 ish this year
  - May be worth revisiting in December or January to see if this is a better metric, does it pass the “sniff test” more than 1.0?
- What can we do now as scientists sourcing supplies in a world of green labeling?
  1. Look up your most used products in the ACT database and compare them to other products in the category
  2. Request sustainability feature information when requesting a quote from a vendor
  3. Refer suppliers to the ACT database if they aren’t participating
  4. Consider local factors that influence the impact of a product during your use, and after
    - a. Can you recycle, reuse, or return it to the vendor?
    - b. Does Caltech participate in equipment buyback programs? Can you?
    - c. Does Caltech recycle equipment such as freezers in different ways depending on the manufacturer?
- Questions:
  - MA/VK: which products get the label? Does a company do all of its products?
    - KM: not an exhaustive list for each company, and it is on companies to sign up and complete them
    - KM: still something to keep in mind, the companies that have participated are likely ones with sustainability goals, so participating alone may be a good sign for the vendor
  - BA: does My Green Labs pay for verico to do this?
    - KM: MGL is non-profit, so likely companies pay. Website is not very transparent, but “scandals” allow you to see more as their website, especially in US, is very generic
  - KM: what could we do to make the ACT label more useful?
    - Better comparability
    - Increased transparency for 3<sup>rd</sup> party verifiers
    - Explaining what the differences mean? Is 34 significantly different from 30?
    - Number of vendors participating
  - LS: are there other verification companies in other countries or is verico the only one?
    - KM: there are competitors but seems like verico is powering ACT label

- LS: are there better companies that are equivalent to the ACT label?
  - KM: hard to know, but one example is IKEA which has good ways to compare products and they use a different company than verico (several companies)
- PB: how many labels are there? Verico is a small company...
  - 1700+
  - KM: Verico is a small company – only a few people to verify stuff, and rely heavily on companies to report accurately, then those few people verify (though likely doesn't take a ton of person-power to do this given the limited number of companies doing this)
- VK: want the labels to be similar to caloric values on food packaging, so to be able to compare a freezer to a freezer is ok, but being able to compare a freezer to a pipette tip would be even better. Need to have a standardized way to talk about this
  - KM: maybe 2.0 will solve this, there seem to be a lot of changes. However, not sure addition of scope 3 will change numbers a lot, need a better way to normalize data
- MC: just a note that even though verico is a small team, and it is hard to do 3<sup>rd</sup> party verification, the ACT team is also the only one in the US trying to do this comprehensively in the US, so still a good resource. For example, the leaf in techmart is not useful since it is self-reported to us by the vendor and is not likely an indication of anything since we have no way to verify what they tell us. So, in future one thing we could do is to use an ACT label threshold and indicate that on the TM website so that users can make more informed choices
  - KM: yes, I don't know how I would have done any better of a system, just have some questions that we would like answered before we decide to use this as our sole gauge of sustainability

Discussion about Sustainable Procurement – for next time! Think about these questions, do your own research, and discuss next time!

1. What questions can we ask vendors to ensure we are \*actually\* purchasing sustainably?
2. What do YOU need to make sustainable decisions?
3. What questions can YOU ask to ensure companies are not greenwashing?
4. What things should we search for during our own research?
  - a. “company name” + “investor relations”
  - b. Look for dedicated sustainability sections or reports on company website
  - c. Annual sustainability reports with goals, actions, progress (can be integrated into financial reports)
  - d. Look for certifications like Energy Star or LEED as indicators of commitment, or other reputable organization certification for specific sustainability practices
  - e. Check for waste management/reduction strategies, waste audits, recycling programs, efforts to minimize waste generation
  - f. Resources:
    - i. [United Nations Sustainable Development Goals](#)
    - ii. [Library of Congress Research Guides on Green Business Standards and Certifications](#)
    - iii. [Carbon Disclosure Project](#) – environmental data on companies

- iv. [ESG Manager \(Global Socrates\)](#) – database providing environmental, social, and governance data on companies
  - v. [Cornell CSR and Sustainability Lists](#)
- 5. Updates to TechMart?
  - a. Restricted commodities?
  - b. Product lists?
  - c. 3<sup>rd</sup> party verification requirements? (ACT label thresholds?)
- 6. Marketplace...
  - a. Swap meets?
  - b. Storage?
  - c. Lab cleanout resources?

#### Updates from Clean Up Event

- 7. REALLY cool responses! Saw 7 labs participate, each one did some very cool things
- 8. Highlighting the Flow Cytometry Group, who found some awesome things and shared a slide deck of their clean up!
- 9. TC: will update the website with new photos, but 2 labs asked for an extension so will wait until the 16<sup>th</sup> to post them 😊

#### I2SL LabSavers Initiative

- 10. I2SL used our program and CU Boulder's program to make an online resource, and they would like feedback. Since we just did cleanups, is anyone willing to read through and provide them feedback?
  - a. JA: sure!
  - b. TC: will post in minutes and in email on Monday

OK, see you next time July 11 and excited to hear Green Labs SURF students!