

LABLINES



Newsletter of the Laboratory Technicians' Association of Victoria
www.ltav.org.au



Inside story: 'The Coronavirus'
Image by Anna Shvets from Pexels

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Editor: Samantha Gunning

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Science ASSIST re-opens!

CSIRO Education has offered interim funding for Science ASSIST and will work in collaboration with ASTA to secure long term sustainable funding for the program.

The Science ASSIST team has reopened the Q&A section of the website to answer all of your questions regarding school laboratory and science room safety.

You have continued free access to all of the technical resources including SOPs, RAs, Information sheets and the Chemical Management Handbook.

To stay up-to-date on all the latest questions subscribe to the Science ASSIST eNews.

assist.asta.edu.au



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President's Report

Geoff Gleadall
LTAV President



Welcome back for the new year.

If you are reading this you were an LTAV member last year, renewals of membership are now due and should be paid by the 30th of April. If you miss that you may not get the next Lablines.

As members you are the people who take your profession seriously, but many of our colleagues are not

members and really should be. We can better represent the interests of our profession if more of us are members.

The same thing also applies to membership of a union.

Membership is not expensive, and in fact so far has not increased ever, though the reality is that we will have to consider an increase after this year. Many of us are able to convince our schools to pay for this because one of the benefits is that membership also gives one a substantial discount on registration at LABCON which is the main professional development opportunity for our profession. If you cannot get your school to pay for it, you can claim it on your tax and get at least some of it back.

Remind your colleagues who have not joined of the many services we provide.

The list server, free to all members of our profession, and providing a valuable tool for collaborating among

ourselves, something that is very important in a profession where most of us work alone.

We provide free membership to technicians in their first year of employment in education.

We provide scholarships to LABCON and CONASTA.

We provide a number of manuals and resources to the profession at little more than cost price.

We can fund regional PD opportunities and network meetings.

And much more

I encourage all of you to be active members this year as you have been last year but also to encourage those of our colleagues who are not members to join us, and all work towards bettering our profession.

From the Editor

Samantha Gunning
Lablines Editor



Hello and welcome to your March Edition; the first Lablines of 2020. I hope you all had a lovely summer break (probably seems like a distant memory now!) and are going well with settling in for the new school year. Before I start

blabbing too much, allow me to introduce myself! I'm your new Lablines editor for 2020 (if that wasn't obvious already!)

I hope you'll join me in giving a virtual round of applause to my predecessor Jessica Boys, who has done an amazing job with Lablines over last few years. Thank you Jess! I'm hoping I can learn from Jess and be able to produce a great read for you all as she has always been so wonderful at doing.

If you've read a copy or two of Lablines before, you'll see that much of the content that makes it so enjoyable consists of contributions from all over. Many of you have featured in A Day in the Life of a Lab Tech, or have told us about a successful prac, or maybe shared the fun from your science fair.

Please know that I am very open to receiving contributions from any of you

(in fact, I encourage it!) – whether you would like to submit an article yourself (perhaps a fun prac you've done; a science-related topic that you're interested in and would like to educate your fellow lab techs on; a funny story from your time in the lab; an advice article for fellow techs with tips and tricks.. you name it!). If it's related to our work and you think it would be an interesting read in Lablines, I'd love to hear about it. Please feel free to email me at s.gunning@braemar.vic.edu.au any time.

I'm also open to general ideas and suggestions – perhaps there's an article you'd like to see, or an idea you have for a regular segment. Fire away, I'm listening!

That's all from me for now! Wishing you all a wonderful rest of the term... not too long now till another well-earned break!



"We now have the capacity to share and discuss the information we see. Taking ownership is a powerful tool. Looking down a microscope is an isolating experience. Being able to see the same image at the same time opens up conversation!"

Professor Gordon Sanson, Monash University



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Mark your calendars for the **2020** Science Technician
Appreciation & Recognition week
24 – 28 August



August 2020						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

SETA have secured some sponsorship to attend the 2020 CONASTA 69 which is being hosted by *Science Educators Association of the ACT (SEA*ACT)* and held at the ANU from 5-8 July in Canberra. **SETA** will be announcing early in 2020 how you can be eligible for this exciting opportunity. Don't forget to check any mail with the subject line **#STAR week**.

In the News – ‘The Coronavirus’

How do you feel when someone gets *your* name wrong? When we say ‘Coronavirus’, we really should be kindly addressing it by its correct name, saying ‘2019-nCoV’. As seasoned scientists (Lab Techs – close enough), it would be rude not to...!

What we know in the media as ‘the Coronavirus’ is actually just one strain of a collective family of the type, which all fall under the umbrella of ‘Coronaviruses’. The outbreak that we are hearing about currently is ‘2019-nCoV’ – 2019 being the year that it has become known; ‘n’ standing for ‘novel’ (meaning, it’s new, we haven’t seen it in humans before); and CoV being – you guessed it – Coronavirus.

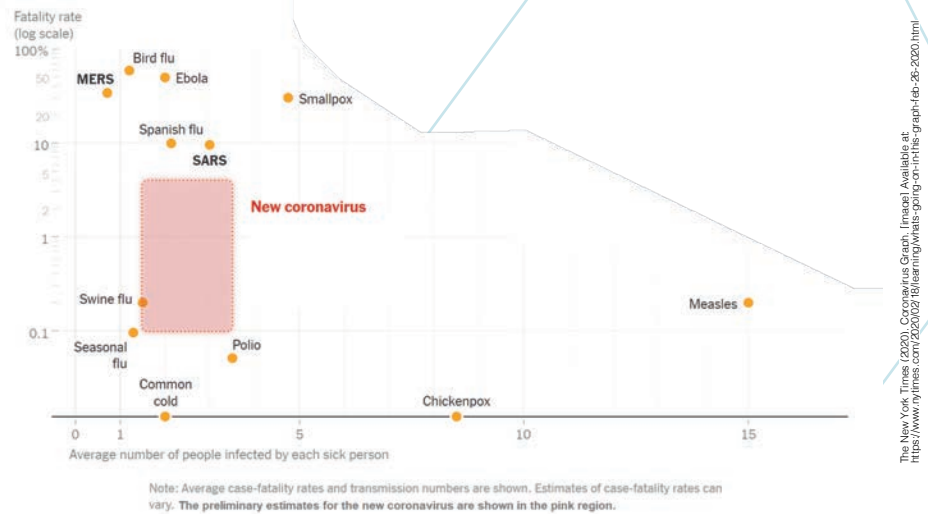
Though it is a new strain, you may be aware of some of its relatives. The common cold is part of the Coronavirus family, along with more serious diseases such as Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS).

Whilst 2019-nCoV has caused a number of deaths, in the majority of cases seen so far, the symptoms are rather mild and not too different from that of a cold – a cough, sore throat, a runny nose and/or fever. As with any illness though, some people are more susceptible to more severe consequences such as breathing difficulties or pneumonia. Those with suppressed or weaker immune systems such as babies, the elderly or those with existing diseases are the most prone to the more serious developments.

Here are some common questions and answers to help you get the basic run-down on the virus:

Where did the virus come from?

The virus is Zoonotic, meaning it can travel from animals to humans. The precise source of the 2019n-CoV hasn’t yet been identified, but we know that it is likely an animal source in China. The illness was first identified due to a group of people who had developed pneumonia that were working in a seafood and live animal market in China.



How is it diagnosed?

Because of the symptoms’ similarity to those of the common cold or flu, it can be difficult to diagnose 2019n-CoV based on these alone, so laboratory analysis is required to identify the strain of the virus.

How likely am I to get sick?

It is unlikely that you would catch the virus just from being out in the open and breathing in air, as the virus does not stay in air for very long. It may however be contained in the micro-droplets expelled when someone sick coughs or sneezes – but these fall to the ground rather quickly.

How can I avoid getting sick? Should I wear a mask?

You know what they say – prevention is the best cure! But, wearing a mask everywhere isn’t totally necessary. Common sense such as regular handwashing, keeping a distance from those with symptoms as well as surfaces that they have touched, are key steps in prevention. Masks are advised for healthcare workers who are more likely to be exposed to the virus through their work.

Should you worry about your online shopping arriving from China?

No. The virus won’t survive long enough on a non-living surface such as packaging or a shipped product. It is estimated to only last a few hours on surfaces and can be killed by common disinfectants.

Is there a cure?

There is currently not a medical cure for 2019-nCoV, but scientists are working on a vaccine. Those who display symptoms like that of a common cold should still see a doctor.

As the virus is new (remember, ‘novel!’) there is still much research to be done. We don’t currently know the exact incubation period, but it is estimated to be 1-12.5 days with an average of 5-6. The mortality rate is not known yet, as there is still much of the epidemiology to be identified. It’s important to remember that, because it’s relatively new, what is known now may change as research continues. Relative to the potential future scale of the virus, current data is not quite enough to paint a detailed and accurate picture. It’s easy to feel a sense of panic about the illness when the news is so focused on the more severe cases. It is in the media’s nature to focus on the big stories that draw attention. But remember, not each case is resulting in death. In fact, most aren’t. Remember things like – not everyone with mild symptoms has seen a doctor, so not all mild cases are reported – it is easy to just see the standout numbers of severe cases that are more likely to be reported, as they demand more medical attention.

If stats are your thing, you can keep up to date with the daily reports from The World Health Organisation (WHO) on their website at <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports>



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Calling all Laboratory Chemists and Managers, Chemistry Teachers and Researchers

OUTSTANDING LABORATORY TECHNICIAN OF THE YEAR

The Victorian Branch of the RACI is seeking nominations for the 2020 Outstanding Laboratory Technician of the Year awards.

The purpose of this Award is to recognise the valuable contribution made by Technicians in the pursuit of chemistry. Criteria for the Award are as follows:

- Technicians must be nominated by one or more Full Members (MRACI, FRACI) of the Institute. (Note - it is expected that the person nominated will have worked closely with the nominating RACI member(s) for at least 12 months).
- Nominations must include a CV, and a brief report, explaining the relationship of the applicant to the nominee (eg. colleague, manager etc), and covering the following areas, with examples of the Candidate's:

Achievement - expertise and effort that have resulted in an exceptional milestone being reached or exceeded.

Collaboration - outstanding teamwork and/or leadership that has ensured a critical task was completed regardless of the challenges faced.

Inspiration - knowledge and expertise that has inspired colleagues, co-workers, students (at all levels), customers or the public.

Ingenuity - inventive thinking and novel application of technical skills that has solved a problem, improved efficiency or resulted in a new concept.

Development - significant personal development that has increased their knowledge and/or technical ability (outside of their routine duties) to the benefit of the organisation.

The RACI Victorian Branch Committee will make the final selection of the winning candidate(s) and may seek further information about candidate(s) from nominating member(s). The Branch may decide not to make an Award if no suitable candidates are nominated, or to make more than one Award if several candidates are judged to be outstanding.

The Award(s) will be presented at the Victorian Branch AGM in September, and will consist of a Certificate and a small monetary prize.

CLOSING DATE FOR NOMINATIONS IS 9 August 2020

Applications, and any further enquiries, to be sent to raci-vic@raci.org.au

Notice Board



KEY DATES 2020

Deadline for next Lablines (June) |
15th May

STAR Week | 24th – 28th August

CONASTA | 5th – 8th July

LABCON | 25th – 27th November



COMMITTEE CHANGES

There have been a few changes to the LTAV committee for 2020, with some members stepping down and a few new faces coming in. Thank you to Suzanne (ex-VP) and Christine (ex-Secretary) who have finished up their time with the committee – your hard work was always appreciated.

The following are other new changes to the LTAV Committee for 2020:

Mary L Jones has moved from General Committee to become our new Vice President;

Sheree Baker has newly joined the Committee as Secretary;

Jessica Boys has stepped down as Lablines Editor to sit as a General Committee member;

Samantha Gunning has joined as Lablines Editor;

We welcome Jodie Pignataro as a General Member
and Will McInnes is now looking after the LTAV Website Administration.

Full Committee details are on the back page of Lablines for your reference.

Notice Board

It has long been recognised that a new technician's first year in education can be very difficult. LTAV has decided to support beginning technicians by offering

FREE FIRST YEAR LTAV MEMBERSHIP

deemed to be paid by the LTAV Committee.

The following conditions apply:

- The payment is at the discretion of the committee and will apply for the course of each membership year,
- The payment is to be made only on behalf of technicians in their first year working in education.
- Members who are given this benefit are expected to continue their membership in subsequent years.
- Such members will have all the rights and obligations of ordinary members, but in accepting the payment also agree not to run for office during that same first year

Please refer all interest and enquiries to:

admin@ltav.org.au

WANTED URGENTLY

RELIEF LABORATORY TECHNICIANS

If you work part time or you know someone who has school laboratory experience and would like to earn some extra money...

Please contact Mary Jones

jones.mary.l@edumail.vic.gov.au

Your name will be added to the Laboratory Technician Relief list for the Melbourne Region. Laboratory Technicians that are available to work in Regional Victoria are also encouraged to make contact!

THANK YOU! YOU ARE AWESOME!

*Ever had a fellow Lab Tech do something super nice for you?
Ever seen a Lab Tech do something awesome, far beyond their call of duty?*

This is your chance to say

THANK YOU!

and to recognise those Lab Techs who you think are

AWESOME!

Please send a sentence or short paragraph to
s.gunning@braemar.vic.edu.au
to be included in the next edition of Lablines.

Lab Tech Get-

LTAV Committee

William McInnes
Koo Wee Rup Secondary College
LTAV Web Administrator



Years at current workplace:

3 years and 1 month

Years as a lab tech:

3 years and 1 month

What qualifications/degrees do you have?

BSc. Chemistry and Genetics/Molecular Biology – Monash University Honours Immunology – Monash University (ACBD)

Is there a particular discipline of science that you take interest in or have expertise in?

Chemistry and Biology are what I am qualified in, but I am actually most passionate/curious about physics. It is quite magical!

How did you come to be a lab tech?

I had seen the horrible work-life balance of research; the long hours, in which you constantly competing to be the best, and knew that was something I would avoid. Teaching had always been in the back of my mind, and when my old high school advertised a lab tech position I thought it was a good middle ground fit! Unfortunately I didn't get my old high school but Koo Wee welcomed me with open arms.

What did you do before you were a lab tech?

I came into lab teching pretty much straight from study but for a year in-between I working in the town of Moe (Gippsland) making agar plates and broths for a company which had clients ranging from Leongatha Hospital to Nestle and Qantas.

What's your favourite thing about being a lab tech?

My favourite thing is the variety; you get to do everything from physics to psychology. You get paid to play with all the best toys you can find, and half of them you get to build yourself! On top of that you get all the school holidays with none of the detentions :)

If you could give your younger, brand-new-just-starting-out lab tech self some advice, what would it be?

I would pass on two pieces of advice:

1. Know your science – half the battle is knowing why an experiment is being performed and the principles behind it. If you worry that you don't have copper tube for a Lenz's law you can use Aluminium. If you are doing a precipitates prac and the reagent concentrations aren't quite right it doesn't matter if all you need is to see a precipitate or not. If you read the ingredients list Bunnings can be a chemical supplier to save money on HCl and NaOH.

2. The listserv is invaluable for resources and one of the best ways to meet techs in your area. If you can contribute even the tiniest bit of information that might be

just what someone else needed, and if you have nothing to add still message, it also lets your local techs know you exist!

If you weren't a lab tech right now, what would you be doing?

I have no clue, I honestly don't know if I'd stay in science! Or whether I would go back and retrain myself as something else.

What do you get up to in your free time?

When I am not in the lab I am usually found in my shed working on the never-ending 'to-do' list around my house, checking out the local op shops for finds (mystery jigsaws are my main hobby right now), binging on sci-fi, or exploring the Gippsland region.

Mary L. Jones
Keilor Downs College
LTAV Vice President



Years at current workplace:

20

Years as a lab tech:

21

What qualifications/degrees do you have?

Bachelor of Science – Biological Sciences

Is there a particular discipline of science that you take interest in or have expertise in?

Like them all even Psychology

How did you come to be a lab tech?

Could not find work as a Grade 1 Scientist and was doing extra courses to up my skills and job landed in my lap when they contacted the TAFE for mature aged student.

What did you do before you were a lab tech?

Variety of Jobs – Assistant Manager in Nursery, Fast Food Customer Service, Fast Food Cook, Stockperson at Uni, Computer Lab Assistant

What's your favourite thing about being a lab tech?

The ability to be flexible, problem solve, and make a difference. Can be minor and go unnoticed, but gives satisfaction of knowing you made it.

If you could give your younger, brand-new-just-starting-out lab tech self some advice, what would it be?

Be firmer in saying no to teachers who don't adhere to the rules or have unreal expectations. Wear good shoes with adequate support for long hours of standing. Don't be afraid to ask for help, when you really need it, be it with lifting or devising a way to make a display or piece of equipment. Learn more still a world of learning left even now for me.

If you weren't a lab tech right now, what would you be doing?

Dream job when I was younger was to work for CDC and find ways to combat diseases.

To-Know-Me!

LTAV Members

Naomi Peters
Werribee Secondary
College



Years at current workplace:

Less than 1

Years as a lab tech:

Coming into my third year as a School Lab Tech, but coming close to a decade in labs with a big break in the middle for family

What qualifications/degrees do you have?

Bachelor of Science – Deakin University

Is there a particular discipline of science that you take interest in or have expertise in?

Micro/Biochem/Chemistry

How did you get come to be a lab tech?

Got my first Lab Tech job straight out of uni, was a Lab Tech until I had kids, went back being a Lab Tech after a 13 year break, moved into Schools in April 2018

What did you do before you were a lab tech?

Have always been a Lab Tech, first in a Government Lab, then a University Lab, then after kids break went into a Commercial Lab, now a School Lab Manager/Tech (on my third school in two years, one short term contract, one maternity leave contract and now ongoing)

What's your favourite thing about being a lab tech?

Helping create a love of Science

If you could give your younger, brand-new-just-starting-out lab tech self some advice, what would it be?

Just roll with it...

If you weren't a lab tech right now, what would you be doing?

No idea, but I would get more knitting done...

Rosy Mullapudi
MAZENOD COLLEGE



Years at current workplace:

7 years

Years as a lab tech:

7 years

What qualifications/degrees do you have?

M.B.B.S (India), Masters in Clinical Embryology (Monash) and Cert IV in Laboratory Techniques (TAFE, Moorabbin)

Is there a particular discipline of science that you take interest in or have expertise in?

I love Biology and Chemistry and a bit of Physics.

How did you come to be a lab tech?

My years of practice in Masters at Monash gradually diverted me to be a lab tech creating loads of interest in working in science laboratories

What did you do before you were a lab tech?

I was working as a medical doctor back in India.

What's your favourite thing about being a lab tech?

Teaching and demonstrating Chemistry and Biology practicals to the students and teachers as well.

If you could give your younger, brand-new-just-starting-out lab tech self some advice, what would it be?

Be enthusiastic and honest in whatever you do
If you weren't a lab tech right now, what would you be doing?

I would have probably working as a Clinical Embryologist



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"The Sugar High"

Dianne Mileo | Sunbury College

When Samantha Gunning asked us to share experiences, I immediately thought of two things:

1. The day I upended a bucket of polystyrene beads all over the prep room. (I shared the photo of this on the list which resulted in a string of empathy.)



2. The exercise I created in conjunction with one of our dedicated science teaching staff. This was a much happier experience and so I would like to share it with you.

It came about as one of the staff was looking for a new way of presenting the sugar content in food. That got me thinking (yes, I know ... quite an achievement) and the result was "The Sugar High".

"The Sugar High" is a Price Is Right style game. Consisting of a board and laminated images of readily available drinks. The teacher can select half a dozen or so to be arranged on the board. I noticed the results varied a little according to how the teacher ran the exercise. The most successful classes were those where the teacher selected one student to come to the front to physically arrange the drinks in order of highest sugar content on the top to lowest on the bottom. The rest of the class were calling out "higher" or "lower" or "no, put that one above the fruit juice" and the list goes on as I'm sure you can imagine. Once the class was happy with the final list the teacher gave the actual sugar content of each of the drinks. The students were very surprised with the results.

Now, as to the practicalities of building the exercise this is what I did:

I dug out the biggest laminated poster I could find and put velcro strips on the back – one across the top for the header and four running vertically for the drink images. I made a header saying 'The Sugar High' and laminated that. I collected images of various drinks (some I got from the internet and some were items I photographed). I think I ended up with 25 or 30 in all.

The bottles and cans I used had the data I needed on them. I also used quite a few images of McDonalds drinks because the data was easy to find. McDonalds have online a list of all the products and - for want of a better word – 'nutritional' information. I cut out all the images and laminated them. I put a velcro strip and the volume of each drink on the back. Everything is flat so it's easy to store. For each drink I recorded the volume; total sugar in the drink and sugar per 100mL. I provided this information to the teacher on three laminated sheets. The first was listed alphabetically; the second by total sugar (highest to lowest) and lastly by sugar/100mL (once again highest to lowest).

The teachers found they had sufficient time in the class to play the game several times. We also used this game on Open Night. The students enjoyed being able to surprise the adults. I hope this is of some use to you.



Drink	Serve Size	Total Sugar	sugar 100mL
Apple Juice	300mL	40.9g	11.7g
Boxal Juice	300mL	39g	10.9g
Coke	600mL	69g	9.9g
Double Choc Big M	600mL	36g	6g
Gatorade	500mL	23.9g	4.9g
Iced Tea	300mL	13.9g	4.2g
McDonalds Cappuccino Large	300mL	14.4g	4.5g
McDonalds Chai Latte Large	500mL	50.4g	10.1g
McDonalds Chai Latte Large	500mL	50.9g	10.2g
McDonalds Chai Skim Large	500mL	44.3g	9.9g
McDonalds Hot Chocolate Large	500mL	44.9g	9g
McDonalds Hot Chocolate Skim Large	600mL	55.7g	6.7g
McDonalds Iced Chocolate Large	600mL	57.9g	9g
McDonalds Iced Chocolate Skim Large	600mL	43.9g	6.9g
McDonalds Iced Chocolate Soy Large	600mL	58.1g	9.2g
McDonalds Iced Latte Large	600mL	58.9g	9.3g
McDonalds Iced Latte Skim Large	600mL	91.1g	14.5g
McDonalds Iced Mocha Large	600mL	91.9g	14.5g
McDonalds Iced Mocha Skim Large	600mL	81.3g	12.9g
McDonalds Iced Mocha Soy Large	400mL	36.5g	9.4g
McDonalds Mocha Large	400mL	34.7g	10.7g
McDonalds Mocha Skim Large	250mL	34.7g	13.9g
Fixed Bull	500mL	31.7g	6.3g
Up & Go	250mL	27g	11g



Conditionaire is now offering more than just Fume Cupboard/Fume Hood/Ductless Fume Cupboard solutions for your School/Company/Research Facility/University etc. We are now in association with two other companies: Validair Sciences and Biosafety. For peace of mind, we are a Nata Accredited Company, so we get all our staff and equipment audited annually. Because of this, our reporting/results, as per the standards, must reference the correct AS/NZS 2014.8-2014 and include a photo/sketch, which is required on the reports as well. Science ASSIST reiterates/recommends using a Nata Accredited Company for testing/servicing.

Website Address <https://assist.asta.edu.au/>

Why are we associating with two other companies you may ask? Very simple; to help our existing and new clients have one Contractor who can provide expertise in three main fields:

Fume Cupboards/Fume Hoods/Biosafety Cabinets/Laminar Flow Units/HEPA Filters

Testing/Hygiene

Odour Testing (testing and supplying reports for Chem Storage Rooms/Cabinets etc. as evidence of unusually high odours in these areas so they can be rectified for proper ventilation)

We have experience in dealing with all models of Fume Cupboards that are on the current market today and most past makes/models. We can offer you original parts on your current makes/models or retro fit ours onto whatever make/model you have if those parts are not available or don't exist anymore, or you simply don't like the existing control/operating system that is already in place. This is a huge advantage over all our competitors, as most cannot do this. All associated companies have full accreditation in their respective fields. I have also presented a list of other services that are available to all our clients and new clients....and we now have access through an online portal for all our clients to see or gather their test reports and have a full asset history on their fume cupboards etc including comments/repairs...but...there will be even more capabilities coming in the future!

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Contact me now if you are unhappy with the current rates you are paying for fume cupboard/fume hood testing, contact me now for a competitive price and if you do become a client of ours, you will have access to our new online portal. How many other companies in today's market offer all this?



Chris Simm | Service Manager
Conditionaire Manufacturing Pty Ltd
Factory 2/11 Leader Street, Campbellfield, Vic 3061
Ph: 9308 7022 Mob: 0408 383 719
Email: chris.conairmfg@bigpond.com

What are You Listening to?

Podcasts and radio shows are great to turn up on your drive home, or maybe even have on in the background as you're working away in the lab. Check out where your fellow lab techs are getting their dose of scientific (and sometimes equally comedic) talk!

Dianne Mileo, Sunbury College:

"I listen to 3RRR on Sunday morning. 9-10 Radio Marinara - all things wet and salty. Some science content.

10-11 Radiotherapy - all things medical.

11-12 Einstein-A-Go-Go - all things happening in science

Serious when they need to be but not dry at all. Some, if not all these programs are available on podcast."

Will McInnes, Koo Wee Rup Secondary College:

"I have always found 'Einstein a Go-Go' on the radio station 'Triple R' good.

They do a podcast with PhD's and academics from Melbourne where they explain their field, what they study and new findings in the field. They also fill in with a bit of Sci Com.

Also it is broadcast live on Sundays if people prefer that, but only the metro people will be able to pick up the frequency, if you are like me can listen online."

PRINCIPLES and PRACTICE

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Welcome to the Wonderful World of Waste and the School Laboratory

Part VIII

This quarter's article looks at some myths in the laboratory and updates the EPA Portal. First, some myths.

With Michael Pola
Envirostore Chemical Consulting
mike@envirostore.com.au

Myth: You can use sand or soil to soak up a liquid chemical spill. Wrong, sand is silicon dioxide, completely insoluble in most things except hydrofluoric acid (and yes, I have seen a MSDS which recommended using sand for a HF spill. Further evidence that many MSDS and their modern version the SDS are works of fiction and error). The only use of sand I can think of is to use it as a physical barrier for a large spill to enclose it while you apply a real absorbent like vermiculite or other mineral based material.

Myth: Use powdered sulphur for a mercury spill.

Wrong again, you will just cover the mercury with the sulphur which may help in keeping the mercury vapour down a bit but there is no actual reaction. Mercury is a liquid metal with a strong affinity for other metal with which it forms solid amalgams. Amalgamation is the property to use against the mercury to convert it from a liquid emitting mercury vapour to a solid metal with zero emission. Tooth fillings are based on this property with various metal mixtures containing copper, tin and silver amalgamating with mercury to form a very strong filling. And there is no evidence of any mercury vapour being emitted from amalgam fillings. A dentist told me ceramic fillings do have a shelf life and will require replacing but the amalgam fillings are virtually permanent. Use zinc granules (not the powder) on a mercury spill to form a zinc amalgam which is a solid and easily swept up.

Myth: Use lead to shield radioactive materials.

Not strictly correct, lead is the shield material of choice for gamma emitters such as Co 60 and alpha emitters such as Am 241 (found in smoke detectors) but won't shield a beta particle emitter such as Sr 90. Beta particles are shielded by aluminium. The presence of radioactive sources in the school lab is usually to show the various shielding efficacy per particle type and to demonstrate the inverse square rule using a Gieger Muller tube detector. The counts at one meter will be a quarter that at two meters (the reciprocal of two squared = 1/4) and one ninth at three meters etc.

Myth: Store your chemicals on shelves in alphabetical order.

Au contraire. They are best stored according to dangerous goods class, preferably within dedicated cabinets and observing the segregation rules from the dangerous goods rules. The main segregation is to keep class 5.1 oxidisers away from class 3 flammable liquids. Also, acids and alkalis are both class 8 corrosives but need to be kept separate.

The only chemicals that can be stored in alphabetical order are the non-dangerous items which are called zone 0 chemicals in schools. And the class 3 cabinet needs to be vented externally. There is no requirement to have any of the other cabinets vented. In the acids cabinet have some sodium carbonate anhydrous (soda ash) in a dish to absorb any fugitive acid vapours but the use of screw topped bottles and not stoppered glass bottles will considerably reduce the chance of any vapours. These class 8 cabinets are now available in plastic and with a physical partition within so that acids and alkalis can be stored within the same cabinet. The dangerous goods rules apply to transport (which is not an issue for schools) but also to storage which certainly is applicable only on a small scale. And remember the dangerous goods system is based on physical and chemical properties that don't change when a chemical becomes waste if it is to be disposed of. Those pesky chemical properties such as flammability, toxicity, dangerous when wet etc. don't disappear just because a chemical is no longer required.

Enough myths, an update on the use of electronic transport certificates which have been mandatory since July 1 last year. The biggest problem for most people is that you must use the Windows Internet Explorer web browser to complete the certificates. No Chrome, Safari or Firefox. All disposers of chemical waste including schools must register on the EPA Portal as a waste producer. Register as a business, the school ABN (Australian Business Number-ask the boss or the Bursar) has to be added and the reason why registration is sought is to do waste transport certificates. You will receive a login name which is an email and a password within a day or two of completing the registration. Fairly painless. Once registered we will help you complete the certificate when we collect your chemical wastes. The days of those coloured paper certificates one of which you had to post to the EPA and one which had to be retained for two years, are gone. By all means contact us if you need any assistance. You are the disposer or producer of waste, so you have to register. We are already registered as transporters of waste and treaters of waste. The third party in the chain is you.

Next article we will have a look at spill kits and PPE and safety equipment.

Feel free to contact us or the new editor Samantha Gunning for any comments or for any topics you would like discussed.

*Don't worry, we've seen worse**



The Envirostore.com.au web site has a special “For Schools” section where you will find some handy downloadable materials addressing spills, banned chemicals, the GHS and more and you can enter details of your chemical waste on line for a disposal quote. Michael Pola’s Labcon and STAV presentations for 2018 are also available

Don’t forget we can supply compliant containers for consolidating your liquid chemical wastes, and we pack all the chemicals for disposal ourselves and we will take everything. We are happy to have a look at your lab, prep room and store and offer suggestions on compliance and good lab practices – this is a free service for our customers. We also supply economical and effective spill kits and free chemical advice.

03 9308 6636 mobile: 0419 566 129 email: sales@envirostore.com.au
43B Nathan Drive Campbellfield Vic 3061. www.envirostore.com.au

***Contact us for a disposal quote, download the manifest form or complete online on our website. We do collections anywhere in Victoria.**

Spotted in the List

The LTAV list-serv is provided to all LTAV members and is an amazing resource for laboratory technicians working in educational institutions. Whether you have a question that needs to be answered, or just need a laugh every now and then, sign up to the list-serv forum and meet a bunch of fun, friendly and helpful lab techs, just like yourself! Go to www.ltav.org.au and click 'Join the LTAV List'.

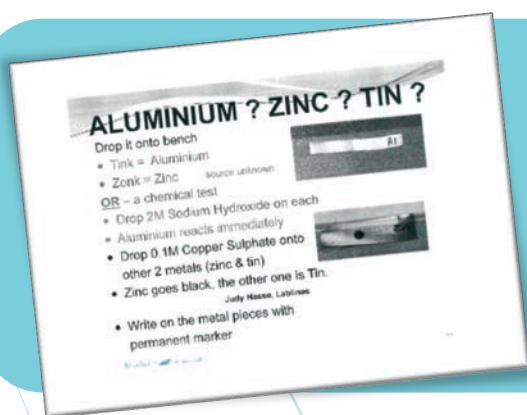
Can you tell a 'Tink' from a 'Zonk'?

From: Donna Lavery
Sent: Thursday, 13 February 2020 1:13 PM
Subject: [LTAVlist] Metals

It seems our metal sample may have been mixed up somewhere along the line. I have jars of different "foils" (aluminium, tin, copper, nickel etc.) that had been separated - some samples were marked but not all. I am having trouble with a couple as they seem to be different to others in the jars but so similar in looks that I can't tell which are aluminium, tin, nickel or silver....

Again they are samples that have been in storage for a while, and I would rather not throw them out, as one staff member suggested, if I can sort them instead.

Cheers,
 Donna



Joelle M Hines
Thursday, 13 February 2020 2:54 PM

Hi Donna,
 I found this a couple of years ago, not sure if it was on the list or in Lablines
 Hope it helps.
 Joelle Hines
 Trafalgar High School

Leonie L Leishman
Thursday, 13 February 2020 7:05 PM

Love the technical terms.....
 Tink !! & Zonk !!

Domenic D Rosa
Thu 13, 02, 2020 10:00 PM

I zink so.



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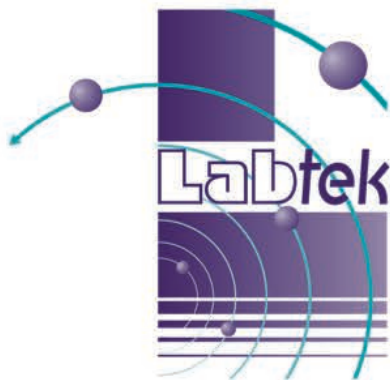
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Want to feature in Lablines?

Of course you do!

Lablines is made so enjoyable to read because of the contributions from our readers and the wider lab tech community – you guys!

We are always open to submissions and ideas! If you are interested in creating a submission for articles such as:

- Telling us about a successful or fun prac you have done
- A week in the life of a lab tech
- Lab tech get-to-know-me
- Lab animals
- Reporting on your school's science fair or STEM week
- Sharing insight on a science-related topic that you're interested in and would like to educate your fellow lab techs on
- A funny story from your time in the lab
- Thank you, you are awesome!
- An advice article for fellow techs with tips and tricks (maybe some general 'hacks', or maybe how you master a notoriously difficult prac)
- Recommendations/reviews of a science related TV show/documentary you've watched, podcasts you've listened to etc.

Or... you name it!). If it's related to our work and you think it would be an interesting read in Lablines, we'd love to hear about it.

Please feel email editor Sam Gunning at
s.gunning@braemar.vic.edu.au

We are also open to general ideas and suggestions - perhaps there's an article you'd like to request, or an idea you have for a regular segment.
Send them on through!

Brain Break

Word Search

Can you find them all? The words are frontwards, backwards, vertical down and vertical up!

Y	R	E	W	Q	P	H	O	T	O	S	Y	N	T	H	E	S	I	S	M
B	B	T	M	I	C	R	O	S	C	O	P	E	P	O	I	U	Y	T	U
B	M	S	I	N	A	G	R	O	E	D	T	Y	U	I	O	L	V	R	L
N	H	J	T	A	F	L	R	Q	L	F	T	K	R	P	R	R	A	F	U
B	D	D	O	A	N	I	M	A	L	R	N	S	F	F	F	F	C	B	C
N	L	A	C	F	G	L	D	S	M	T	J	D	Z	V	P	V	U	H	I
I	G	J	H	C	V	B	A	C	E	L	L	W	A	L	L	B	O	K	T
S	U	L	O	E	L	C	U	N	M	A	G	G	Q	S	A	G	L	G	E
Y	T	A	N	D	F	J	L	Z	B	F	D	O	R	D	N	T	E	D	R
D	H	I	D	T	C	H	L	O	R	O	P	L	A	S	T	H	S	E	C
V	S	T	R	N	H	X	V	B	A	R	T	G	I	O	K	J	D	U	I
N	B	G	I	I	R	D	G	J	N	F	G	I	U	A	L	U	F	J	M
O	R	N	A	L	O	E	R	Y	E	V	B	B	E	P	O	I	G	K	S
I	S	F	P	P	M	K	R	T	M	I	T	O	S	I	S	O	H	T	A
S	E	M	O	S	O	S	Y	L	A	S	D	D	G	B	M	L	J	I	L
U	F	J	P	N	S	G	X	F	V	M	D	Y	S	R	O	F	K	S	P
F	T	K	O	Y	O	R	G	A	N	E	L	L	E	T	S	D	L	S	O
F	Y	G	N	T	M	S	A	L	P	O	T	Y	C	Y	I	A	F	U	D
I	N	U	C	L	E	U	S	C	N	M	R	I	B	O	S	O	M	E	N
D	N	A	D	F	F	S	A	F	H	J	D	R	E	T	R	Z	G	S	E

ANIMAL	ENDOPLASMIC RETICULUM	ORGANELLE
CELL MEMBRANE	GOLGI BODY	ORGANISM
CELL WALL	LYSOSOMES	OSMOSIS
CHLOROPLAST	MICROSCOPE	PHOTOSYNTHESIS
CHROMOSOME	MITOCHONDRIA	PLANT
CYTOPLASM	MITOSIS	RIBOSOME
DIFFUSION	NUCLEOLUS	RNA
NUCLEUS	DNA	TISSUE
	VACUOLE	

ANSWERS – Fact or Fiction?
 1. Fact. 2. Fiction – 32. 3. Fact. 4. Fact. 5. Fact. 6. Fiction. 7. Fact. 8. Fiction – 3.

Fact or Fiction?

1. Mercury is the nearest planet to the sun.

Fact/Fiction

2. An adult human has 30 teeth.

Fact/Fiction

3. AB negative is the rarest blood type.

Fact/Fiction

4. Sound travels faster in water than in air.

Fact/Fiction

5. Lightning is hotter than the sun.

Fact/Fiction

6. A human red blood cell survives 100 days.

Fact/Fiction

7. Jupiter completes a whole rotation in 10 hours.

Fact/Fiction

8. An Octopus has four hearts.

Fact/Fiction

(answers page 21)

You Argon-na be Laughing!

Q: What did the angry electron say when it was repelled?

A: "Let me atom!"

Q: What kind of chemical element hates to be a follower?

A: Lead

Q: What period of time has the least weight?

A: A light year!

Did you Know?

The longest cells in the human body are the motor neurons. They can be up to 4.5 feet long and run from the lower spinal cord to the big toe!

2020 LTAV CONASTA 69 Scholarships

This year the Laboratory Technician's Association of Victoria will again support two members in furthering their knowledge and expertise in science education by offering scholarships to attend CONASTA 69, the science teachers' conference hosted by ASTA. CONASTA always has a number of workshops and forums relevant to lab technicians and is a valuable way to learn more of what is happening in today's science world.

CONASTA 69 will be held in Canberra between 5th – 8th July 2020. For an overview of the conference, go to asta.edu.au/conasta

All school-based Victorian science laboratory staff who are LTAV members are invited to apply for the scholarship, which will cover travel, registration and accommodation costs.

Any other costs and charges associated with acceptance of this scholarship must be met by the winner(s). Two scholarships only will be offered. Awards are not transferable.

Applicants should provide a brief CV and details of the anticipated benefits for both the applicant and the Association. The successful applicants will be expected to write a small article for Lablines outlining their experiences at the conference.

Written applications addressed to the LTAV Secretary can be posted to:

Laboratory Technicians' Association of Victoria
S3/159 Burwood Road,
Suite 150
Hawthorn, Victoria 3122

or emailed to: admin@ltav.org.au

and must be received no later than **Friday 1st May 2020**

SCIENCE EDUCATORS CONFERENCE

The logo for CONASTA 69 is a circular emblem divided into two halves. The left half is green with a pattern of small white dots, resembling a leaf or a microscopic view. The right half is blue and purple with a pattern of small white dots, resembling a night sky or a microscopic view. The word 'CONASTA' is written across the top in a stylized font, with 'CON' on the left and 'ASTA' on the right. Below the emblem, the text 'SCIENCE REVEALED' is written in a bold, sans-serif font. At the bottom of the emblem, the text 'CANBERRA 5 - 8 JULY 2020' is written in a curved path.

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activities

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CONASTA 69 is the national science education conference of the Australian Science Teachers Association, proudly hosted in 2020 by the Science Educators' Association of the ACT (SEAACT).



LTAV

Laboratory Technicians'
Association of Victoria

Membership Information

ABN: 96 439 156 002

Membership is a calendar year - 1st January 2020 to 31st December 2020, regardless of when the membership fee is paid.

LTAV membership belongs to you, the Lab Tech and not the school. If you leave your school, you take your membership with you. LTAV membership is not transferable.

If you haven't been a member previously, you need to fill in an Application for Membership form found at www.ltav.org.au under 'membership' OR email membership@ltav.org.au and ask for a form. Lab Techs in their first year of employment in education are eligible for free membership.

To renew your membership or to register for the first time there are two options:

1. Go to www.ltav.org.au and under 'membership' click on '2020 renewal'. You have the choice of requesting an invoice (which is automatically sent to your email address) or paying straight away via credit card.
2. Fill in the 2020 LTAV MEMBERSHIP TAX INVOICE form which you will find in Lablines and on the LTAV website. This form needs to be emailed to membership@ltav.org.au or mailed. If you mail the form, please be aware that it can take up to a month to finally reach the membership officer.

Payment options

1. As mentioned above you can pay online via credit card
2. You can pay directly into the LTAV bank account (details are on the tax invoices)
3. Cheques can be mailed to the LTAV post box (see the letter head for address)
4. Cash can be given directly to the membership officer

If your school is paying your membership, you need to give your accounts department the tax invoice, either the one you receive via email OR the 2020 LTAV membership tax invoice form you filled in and sent to the membership email address.

LTAV members receive 4 issues of Lablines, our fantastic magazine, per year. Your issue is posted just before the end of each term. The first issue is posted to all members from the previous year as a courtesy because membership payment isn't due until April 30th and the first issue goes out before then. It is important to note that although membership payment can be made any time during the membership year, you may miss out on some issues of Lablines if you pay after April 30th. The reason for this is that when Lablines goes to print, the number ordered is based on the number of members at the time, including renewals received without payment, plus about 20 extra copies.

2019 has been a fantastic year with record numbers of Lab Techs getting behind their association and taking out membership. If you have not joined LTAV yet, now is the time to do it and make our association even stronger. LABCON registration is much cheaper if you are a member with the difference in cost for a non-member being more than the actual \$44 cost of annual membership fee.

Any questions or comments please send an email to membership@ltav.org.au



LTAV

Laboratory Technicians'
Association of Victoria

By Lab Technicians for Lab Technicians
S3/159 Burwood Road
Suite 150
Hawthorn VIC 3122
www.ltav.org.au

2020 LTAV MEMBERSHIP TAX INVOICE

ABN: 96 439 156 002

Please tick that which applies:

☐ **REGISTRATION** (first time members) ☐ **DETAILS** (continuing members)

New members to LTAV must complete an APPLICATION FORM as well (refer to website)

Technicians employed or formerly employed in educational institutions are eligible for membership of LTAV. Financial members receive Lablines, LABCON 2020 Registration Booklet plus discount and voting rights at the Annual General Meeting at LABCON.

Member name: _____

Name of School / Institution: _____

Postal address of School / Institution: _____

Suburb: _____

State: _____

Postcode: _____

Email address: _____

Phone number: _____

Position in organisation: _____

Temporary or permanent? (circle one)

If temporary please give details of term of employment: _____

Have you registered at more than one school / Organisation? Yes / No

If yes, please indicate where you would like your Lablines sent: _____

Region: _____

Signed: _____

Date: _____

☐ PLEASE TICK THIS BOX if you are a new Laboratory Technician or Assistant in your first year of employment in education.
LTAV will cover the cost of your Membership for this first year.

INDIVIDUAL MEMBERSHIP FEE – FULL YEAR (1st Jan 2020 to 31st Dec 2020) \$44.00 (includes GST).

Payment due by 30th April 2020

Send payment to: Laboratory Technicians' Association of Victoria Inc
S3/159 Burwood Road, Suite 150, Hawthorn, Victoria 3122

Please make Cheque or Money Order payable to:

Laboratory Technicians Association of Victoria.

This Membership Tax Invoice must be sent with payment.

Direct Banking details: Commonwealth Bank of Australia

BSB: 063 532 Account Number: 1040 1068

Reference payment with SURNAME AND SCHOOL NAME

OFFICE USE ONLY

Tax Receipt No: _____

Payment date: _____

Method: _____

If paying by Direct Credit the Remittance Advice must be posted or can be emailed to: membership@ltav.org.au Please ensure this Membership Form is posted or emailed at the same time. Please note that Memberships cannot be processed if paperwork is incomplete. Tax Receipts will be issued to confirm LTAV Membership.



LTAV

Laboratory Technicians'
Association of Victoria

By Lab Technicians for Lab Technicians
S3/159 Burwood Road
Suite 150
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www.ltav.org.au

LTAV PUBLICATIONS 2020

The following laboratory reference manuals are available from LTAV:

BIOLOGY REFERENCE MANUAL, 2013: \$35.00 for digital [USB] and black & white hard copy combination.

This REVISED handbook contains information on biological techniques, reagents, stains and culture media commonly used in secondary schools. Dale Carroll, Ritva Fazio, Sarah Daniele and Wendy Hurle have updated the earlier version by Dale Carroll, Ritva Fazio, Jeannene Bradbury and Marg Rubans of the original authors of: Jenny Kopsidas, Rita Poole, Jean Stokes and Maya Wagner.

PHYSICS REFERENCE MANUAL, 2013: \$35.00 for digital [USB] and black & white hard copy combination.

Svetlana Machouba has made many updates to the earlier version by Sabino Del Balso and Valerie Clements.

CHEMISTRY: A REFERENCE MANUAL FOR LABORATORY TECHNICIANS, 2008 by Geoff Gleadall (Dip.App.Sci.):

\$35.00 for digital [USB] and black & white hard copy combination. A comprehensive guide for the beginning and experienced Laboratory Technician in all aspects of the chemistry laboratory.

LABORATORY MANAGEMENT DATABASES by Geoff Gleadall Dip.App.Sci. [Digital – USB], Version 2, 2009: \$35.00

LTAV PUBLICATIONS TAX INVOICE & ORDER FORM

ABN 96 439 156 002

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Publication	Price (each)	Quantity	Sub total
Biology Ref Manual 2013 Digital [USB] + Hard copy	\$35.00		
Physics Ref Manual 2013 Digital [USB] + Hard copy	\$35.00		
Chemistry: a Ref Manual for Lab Technicians 2008 Digital [USB] + Hard copy	\$35.00		
Laboratory Management Databases 2009 Digital [USB]	\$35.00		
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Prices are inclusive of GST		TOTAL	

Payment

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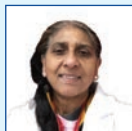
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Please feel free to contact any member of your committee with any queries or concerns.
Members are always welcome at committee meetings. Contact any committee member for more information.

LTAV Committee Meeting Dates 2020

5th May | 28th July | 1st September | 20th October | 1st December

The meetings usually go from 6:30– 9:30 p.m.

All members of LTAV are most welcome to attend.

Please be in touch with the LTAV Secretary to confirm time (usually 6:30pm) and location.