

STUDENT TOOLKIT



HOW TO:

**TALK TO YOUR SCHOOL
ABOUT SAFER
DISINFECTANTS**

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PURPOSE

Keeping students safe & healthy at school is a priority for many educators, administrators, as well as parents and guardians. But while teachers prioritize the health of students, unfortunately many of the disinfecting products used at our schools often contain harmful chemicals that can actually put our health at risk.

Thankfully, there are numerous products that are safer and just as effective at killing bacteria and viruses – including COVID-19.

This toolkit is designed to help start the conversation with your classmates, educators, custodians, and school administrators about harmful cleaners and disinfectants – while also providing helpful resources, sensible solutions and best-practice protocols that will reduce exposures to toxic chemicals, and help keep all of us safe.

Ultimately, this toolkit will provide the information you need to start important conversations, organize and create change in your community.

SAMPLE LETTER

Use this letter as a guide to help start the conversation with your school administrator, teachers, or principal about safer disinfectants

Hello [Name of School district administrator],

My name is [Insert your Name] and I am a student who currently goes to [Insert School's Name]. I am writing to learn more about our school's plans for cleaning and disinfecting in the fall.

Last year, many schools (including ours) vastly ramped up cleaning and disinfecting protocols in response to the COVID-19 pandemic. This effort was largely based on the best advice available at the time from the Centers for Disease Control (CDC) which was to "clean and disinfect" surfaces frequently. This advice unfortunately resulted in significantly increased costs for cleaning and disinfecting labor and materials as well as increased exposure to harsh disinfectant chemicals to custodians, teachers and students. Disinfectant chemicals have the potential to cause skin and eye burns, headaches, exacerbate asthma and more.[1] In the end, the increased disinfecting (above and beyond regular cleaning) likely added little to no benefit in preventing outbreaks or protect health.

I am writing to make you aware that the CDC guidance for cleaning and disinfecting for schools and other facilities has been updated this spring.[2] The new guidance is based on a CDC Science Brief published on April 5, 2021,[3] which determined that the principal way people were infected with Covid was through respiratory exposure. The Science Brief found that the risk of being infected through a contaminated surface is roughly a 1 in 10,000 chance. The new guidance puts the emphasis on cleaning rather than disinfecting as the most effective strategy for sanitation of surfaces. The new guidelines only recommend disinfecting when certain higher risk conditions apply.

Specifically, the CDC guidance now states:

"Cleaning and promoting hand hygiene are important everyday actions schools can take to slow the spread of COVID-19 and other infectious diseases and protect students and staff.

Cleaning with products containing soap or detergent reduces germs on surfaces and objects by removing contaminants and may also weaken or damage some of the virus particles, which decreases risk of infection from surfaces. Cleaning high touch surfaces and shared objects once a day is usually enough to sufficiently remove virus that may be on surfaces unless someone with confirmed or suspected COVID-19 has been in your school." [4]

Disinfecting is only recommended in higher risk situations such as when there is high transmission of COVID-19 in the community, a space is occupied by people at increased risk of severe illness from COVID, or when there has been a case of someone with COVID in the school within the last 24 hours.

Regular and frequent hand hygiene is still highly recommended by the CDC as an effective measure to prevent transmission of infection as well. Hand hygiene has been proven to reduce the spread of colds, and gastrointestinal illnesses in schools as well.

These new guidelines provide a common-sense approach to keeping our school clean and our staff and students safe and healthy. They also present an opportunity for potential cost-savings with respect to purchasing of disinfectants, and the time/labor of applying them frequently.

I was particularly concerned this year with the health impacts from [enter specific concerns you had at your school such as:

- the overall increased use of disinfectants and the exposure to me/ custodians/ other students
- the use of quat-based disinfectants, rather than safer active ingredients
- the practice of requiring students to disinfect their own classroom spaces
- the use of disinfectant sprayers/foggers in the school
- the exposure from frequent disinfectant use on the school bus]

I would like to know how our school plans to alter its cleaning and disinfection protocols in the fall in response to the new CDC guidance. There is an opportunity now to reflect on the past year's practices and to implement safer, healthier and potentially less-expensive protocols for the fall.

I'm happy to set up a time to talk or help in any way in developing a policy that requires less use of disinfectants in our schools for the safety and health of both students and staff.

Thank you, [Insert your name] [Insert the best way to contact you]

Find this letter online at: [<https://www.womensvoices.org/sample-letter-for-schools-quit-the-quats/>]

WHY HAND WASHING?

It can be difficult to sanitize or disinfect surfaces in schools frequently enough to effectively protect health. For example, many disinfectants require clean surfaces (free of dirt & grime) to work effectively, and often require a wait-time of anywhere from 1 to 10 minutes in order to kill germs. Instead, washing hands frequently is proven to be an effective and simple way to stop the spread of illness.

Washing hands can keep you healthy and prevent the spread of infections from one person to the next.

AVOID antibacterial & fragranced soap when possible

(Antibacterial and fragranced soap often contain harmful ingredients. Antibacterial soaps are not necessary for stopping the spread of germs.)

Use hand-sanitizer **ONLY** if soap & water is not available



DISINFECTING WIPES WARNINGS

Many popular disinfectant wipes (such as the ones made by Clorox and Lysol) **contain harsh chemicals that can cause long-term and acute side effects like skin and eye irritation.**

These harmful chemicals are called **quats**. **Quats are pesticides.** They are chemicals that are skin irritants[1], can irritate your lungs [2], and have been **linked to asthma and reproductive harm[3].**

The overuse of quats can also lead to the promotion of antibacterial-resistant bacteria (“superbugs”)[4,5].

Remember: In order for disinfectants to work properly, surfaces must be clean of grime, and remain wet for the duration of the disinfectant’s wait time (these can vary anywhere from 30 secs. to 10 mins.).

Disinfectant chemicals called quaternary ammonium compounds “**quats**”, commonly found in wipes are especially problematic.

Look instead for safer disinfectant wipes with active ingredients such as **hydrogen peroxide, alcohol, or lactic acid.**

DID YOU KNOW?

There is no evidence that shows using disinfecting wipes, sprays, or antibacterial soaps are any more effective at preventing illness in the classroom than washing with regular soap and water.

AVOID

Avoid disinfectant wipes including quaternary ammonium compounds “quats” as the active ingredient— found on the label with names like:

- Benzalkonium chloride
- Benzethonium chloride
- Alkyl dimethyl benzyl ammonium chlorides (C12-16)
- Alkyl dimethyl benzyl ammonium chloride (C14 60%, C16 30%, C12 5%, C18 5%)
- Alkyl dimethyl ethylbenzyl ammonium chloride (C12- 14)
- Alkyl dimethyl ethylbenzyl ammonium chlorides (C12- 18)
- Didecyldimethylammonium chloride
- Dioctyldimethylammonium chloride

[1] Basketter, DA (2004) Strong irritants masquerading as skin allergens: the case of benzalkonium chloride. Contact Dermatitis. Vol.50, No. 4: 213-7. April 2004. [2] Preller, L. (1995) Lung function and chronic respiratory symptoms of pig farmers: focus on exposure to endotoxins and ammonia and use of disinfectants. Occupational and Environmental Medicine. Vol. 52: 654-660. (1995). J.A. Bernstein et al. (1994). A combined respiratory and cutaneous hypersensitivity syndrome induced by work exposure to quaternary amines. Journal of Allergy and Clinical Immunology, August 1994, vol. 94, no. 2, Part 1, 257-59. Jajosky, RA et al. (1999) Surveillance of Work-Related Asthma in Selected U.S. States Using Surveillance Guidelines for State Health Departments – California, Massachusetts, Michigan, and New Jersey, 1993-95. MMWR 1999;48 (No. SS-3) June 25, 1999. [3] Melin VE, Potinini H, Hunt P, Griswold J, Siems B, Werre SR, and Hrubec TC (2014) Exposure to common quaternary ammonium disinfectants decreases fertility in mice. Reproductive Toxicology. 50: 163–170. December 2014. Melin VE, Melin TE, Dessify BJ, Nguyen CT, Shea CS, and Hrubec TC (2016) Quaternary ammonium disinfectants cause subfertility in mice by targeting both male and female reproductive processes. Reproductive Toxicology. 59: 159–166. December 2016. Hrubec TC, Melin VE, Shea CS, Ferguson EE, Garofola C, Repine CM, Chapman TW, Patel HR, Razvi RM, Sugrue JE, Potinini H, Magnin-Bissel G, and Hunt PA (2017) Ambient and Dosed Exposure to Quaternary Ammonium Disinfectants Causes Neural Tube Defects in Rodents. Birth Defects Research 109:1166–1178, 2017. [4] Zou L, Meng J, McDermott PF, Wang F, Yang Q, Cao G, Hoffmann M, Zhao S. (2014) Presence of disinfectant resistance genes in Escherichia coli isolated from retail meats in the USA. Journal of Antimicrobial Chemotherapy. 69(10):2644-9. October 2014. Sundheim G, Langsrud S, Heir E, and Holck AL (1998) Bacterial resistance to disinfectants containing quaternary ammonium compounds. Holck International Biodeterioration & Biodegradation. Volume 41, Issues 3–4, pp: 235-239. 1998. Duran N, Temiz M, Duran GG, Eryilmaz N, and Jenedi K. (2014) Relationship between the resistance genes to quaternary ammonium compounds and antibiotic resistance in staphylococci isolated from surgical site infections. Medical Science Monitor. 2:20:544-50. April 2014. [5] <https://www.womensvoices.org/2020/03/30/safer-disinfecting-at-home-in-the-times-of-coronavirus/#fn10>

Safer Disinfectants

EPA Certified Disinfectants to be Used Against COVID-19



The majority of the popular disinfectants contain either quaternary ammonium chlorides (quats) or chlorine bleach. Both types of disinfectants are potent against a number of different bacteria and viruses. Unfortunately, they also have some **significant drawbacks and health concerns ranging from chemical burns to reproductive harm.**

However, there are alternative disinfectant chemicals that are as effective (or more) in killing viruses and other germs without these health hazards, such as:

- alcohol/ethanol/isopropanol
- hydrogen peroxide
- lactic acid
- citric acid
- thymol

Several products containing these safer disinfectant ingredients have been approved for use against Coronavirus by the U.S. EPA.

To find these products you can use the **EPA List N webtool**; an app that enables people to quickly identify disinfectant products that meet EPA's criteria for use against COVID-19. Search the List N by active ingredient (like hydrogen peroxide) to find safer options.

OR **simply reference the table of products in this document**, that are both safer and approved by the EPA to use against Coronavirus.

Health & Safety Concerns: Quats and Bleach in Disinfectants



Health Hazards of Quats

Quats are inexpensive and are potent against numerous infectious agents. But there is reason for concern about the use and overuse of quats:

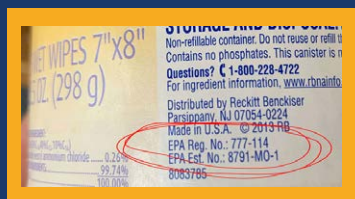
- Quats are potent skin irritants and can cause rashes and dermatitis.
- Quats can irritate your lungs leading to breathing problems.
- Cleaning workers exposed regularly to quats have developed occupational asthma.
- Quats are linked to reproductive harm, potentially affecting fertility, and possibly leading to birth defects.
- Widespread use of quats is contributing to the global problem of antimicrobial resistance, leading to the development of "superbugs" that cannot be controlled with antibiotics.

Health Hazards of Chlorine Bleach

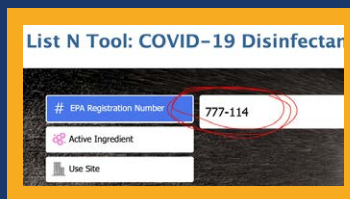
- Chlorine bleach is a significant lung and eye irritant.
- Extended chlorine bleach exposure can cause chemical burns on skin.
- It is the leading cause of chemical eye injuries in children in the U.S.. in the category of cleaning products.
- It is also the leading cause of calls to Poison Control for the category of cleaning products, resulting in the greatest number of moderate to severe health outcomes.

Want to know more about the safety and effectiveness of a disinfectant? Here's how to search for it using the EPA List N.

1. LOCATE the EPA registration number on the label.



2. GO TO EPA List N [<https://bit.ly/3f04b6T>] click LAUNCH & search by the EPA reg number.



3. REVIEW your results, specifically the "Active Ingredient(s)".

EPA Registration Number	Active Ingredient(s)	Product Name	Company
777-114	Quaternary ammonium	Lysoil® Disinfecting Wipes (All Scents)	Reckitt Benckiser LLC

NOTE: In this example, the product's active ingredient is quaternary ammonium (quats), which are linked to health concerns.

Products containing quats should be avoided.

The lists below are from the San Francisco Department of the Environment (SFE) and show disinfectants that contain safer active ingredients and are approved by US EPA for COVID-19. The list also notes SFE screened products and products that are included in the US EPA's Design for the Environment (DfE) program. **For EPA' DfE products, all ingredients (not just "active" ingredients) are considered least hazardous.**

List of Safer Disinfectants: Residential & Small Business Use

DfE	SFE	Product Name	Contact Time (in minutes)	EPA Registration Number*
YES	YES	ECOS One-step Disinfectant Cleaner	5	34810-35
YES	YES	Lemi Shine Disinfecting Wipes	3	34810-37
YES	YES	Lysol Multi-Purpose Cleaner with Hydrogen Peroxide Lysol Cleaner (Citrus)	10	777-126
	YES	Arm & Hammer Essentials Disinfecting Wipes	5	95337-1
	YES	Beaumont's Citrus Magic Multi-Purpose Disinfectant Cleaner	10	85873-4
	YES	Bona PowerPlus Antibacterial Surface Cleaner	10	85873-4
	YES	Bona PowerPlus Hard Surface Floor Cleaner (Antibacterial Formula)	10	84683-4
	YES	Boulder Clean	10	34810-35
	YES	Cleanwell Botanical Disinfecting Wipes	10	84683-4
	YES	CRC Multi-Surface Disinfecting Cleaner	10	85837-4
	YES	Honest Disinfecting Spray	10	85837-4
	YES	Katzkin Md Multi-Surface Disinfectant	10	35810-25
	YES	Manduka Botanical Disinfecting Cleaner	10	35810-25
	YES	Method Antibac All-Purpose Cleaner	10	75277-2
	YES	Quick Shine Disinfectant Floor Cleaner	10	85837-4
	YES	SC Johnson Windex Multi-Surface Disinfectant Sanitizer Cleaner	10	4822-593
	YES	Seventh Generation Disinfecting Bathroom Cleaner Lemongrass Citrus Scent	10	84683-3
	YES	Seventh Generation Disinfecting Multi-Surface Cleaner	10	84683-3
		Bona PowerPlus Antibacterial Hard-Surface Floor Cleaner	10	91861-2
		Clorox 4 in One Disinfecting Spray	5	67619-29
		Clorox Fabric Sanitizer	0	5813-110
		Clorox Fabric Sanitizer1 (aerosol)	5	67619-29
		CloroxPro Disinfecting Bio Stain & Odor Remover	0	67619-33
		Clorox Pro 4 in One Disinfectant & Sanitizer, Lavender	5	67619-29
		Grove Co. All-Purpose Disinfectant Cleaner	10	85837-4

DfE	SfE	Product Name	Contact Time (in minutes)	EPA Registration Number*
		Lysol Foaming Bathroom Cleaner Mango & Hibiscus Scent	5	675-55
		Lysol Neutra Air 2-in-1 Tropical Breeze	0	777-136
		Smitty's Sea-wash All-Purpose Disinfectant Cleaner	10	85837-4
		Zep Ready-to-Use Peroxide Disinfectant	1	6836-385

List of Safer Disinfectants: Custodial & Large Institutions

DfE	SfE	Product Name	Contact Time (in minutes)	EPA Registration Number*
YES	YES	Contact Citric Acid Disinfectant	3	34810-37
YES	YES	Diversey Accel 5 RTU	5	74559-8
YES	YES	ECOS Multi-Purpose Disinfectant Wipes, fresh citrus	3	34810-37
YES	YES	ECOS Pro Multi-Purpose Disinfectant & Sanitizer, fresh citrus	5	34810-35
YES	YES	Purell Food Service Surface Sanitizer	0	84368-1
YES	YES	Purell Healthcare Surface Disinfectant	0	84368-1
YES	YES	Purell Professional Surface Disinfectant	0	84368-1
YES	YES	Wexford Cleanside RTU	3	34810-37
	YES	Benefect Botanical Decon 30 Disinfectant	5	84683-3
	YES	Benefect Botanical Disinfectant	10	84683-1
	YES	Benefect Botanical Disinfectant Wipes	10	84683-4
	YES	Clorox Commercial Solutions 4 in One Disinfectant & Sanitizer	5	67619-29
	YES	Clorox Commercial Solutions Hydrogen Peroxide Disinfecting Wipes	0	67619-25
	YES	Clorox Healthcare Citrace Hospital Disinfectant & Deodorizer	5	67619-29
	YES	Clorox Healthcare Hydrogen Peroxide Disinfectant Wipes	0	67619-25
	YES	Clorox Healthcare Hydrogen Peroxide Disinfectant Cleaner	0	67619-24
	YES	Clorox Hydrogen Peroxide Disinfectant Cleaner	0	67619-24
	YES	Diversey Oxivir 1	1	70627-74
	YES	Diversey Oxivir 1 Wipes	1	70627-77
	YES	Diversey Oxivir Tb	1	70627-56
	YES	Diversey Oxivir Tb Wipes	1	70627-60

DfE	SFE	Product Name	Contact Time (in minutes)	EPA Registration Number*
	YES	Ecolab Peroxide Disinfectant & Glass Cleaner RTU	0	1677-251
	YES	Ecolab Peroxide Multi Surface Cleaner and Disinfectant (Concentrate)	0	1677-238
	YES	Ecolab Sink & Surface Cleaner Sanitizer	0	1677-260
	YES	Hillyard Citrus Disinfectant	3	34810-37
	YES	Midlab Bright Solutions Hb202	1	45745-11
	YES	Midlab Maxim Facility +	1	45745-11
	YES	Procter & Gamble Comet Disinfecting-Sanitizing Bathroom Cleaner	10	3573-54
	YES	Prorstore Botaniclean	10	34810-25
	YES	Scott 24 Hour Sanitizing Wipes	6	9402-17
	YES	Seventh Generation Professional Disinfectant Spray	10	84683-3
	YES	Seventh Generation Professional Disinfecting Bathroom Cleaner	10	84683-3
	YES	Seventh Generation Professional Disinfecting Kitchen Cleaner	10	84683-3
	YES	Us Chemical Shurguard HP	5	70627-62
	YES	Us Chemical Shurguard HP RTU	1	70627-56
	YES	Victory Bay Peroxide Disinfectant Cleaner	1	45745-11
	YES	Virox Technologies / Contec Preempt Wipes	1	74559-3
	YES	Waxie Edc 70 Hp Disinfectant Cleaner	1	45745-11
	YES	Waxie Hp Disinfectant Cleaner	1	45745-11
	YES	Waxie Solsta 730 Hp Disinfectant Cleaner	1	45745-11
	YES	Wexford Home Everyday Cleaner	10	34810-25
		Bioesque Botanical Disinfectant Solution	1	87742-1
		Clorox Commercial Solutions Disinfecting Bio Stain & Odor Remover	0	67619-33
		CloroxPro Disinfecting Bio Stain & Odor Remover, Spray	0	67619-33
		Curis CUroxide	30	93324-1
		Diamond Shine Disinfectant 360	10	85837-4
		Diversey Oxivir Five 16 Concentrate	5	70627-58
		Echem Hyper Disinfectant RTU	1	6836-385
		Ecolab Virasept	4	1677-226
		Keystone/Sysco/Ecolab Surface Cleaner Sanitizer RTU	0	1677-259
		KicTeam Disantech	3	34810-37

DfE	SFE	Product Name	Contact Time (in minutes)	EPA Registration Number*
		KicTeam Disantech Wipes	5	34810-36
		Neogen Companion Disinfectant Wipes	5	34810-36
		PDI Sani-Hypercide Germicidal Spray	1	9480-14
		Peroxigard Concentrate One Step Disinfectant Cleaner & Deodorizer For Use in Life Sciences	5	74559-4
		Pronatural LEXX Disinfectant & Cleaning Solution	10	91452-1
		Purworld Ready-to-Use Fresch	10	34810-25
		SC Johnson Professional Windex Multi-Surface Disinfectant Sanitizer Cleaner	5	4822-592
		Scican Optim Tb	1	74559-1
		Scican Optim Tb Wipes	1	74559-3
		Sono Hydrogen Peroxide Disinfectant	1	6836-385
		Vapor Fresh Disinfecting Gym Wipes	5	34810-36
		Virox Animal Health Rescue Concentrate One Step Disinfectant Cleaner & Deodorizer	5	74559-4
		Virox Technologies / Contec Preempt Concentrate	5	74559-4
		Virox Technologies / Contec Preempt RTU	1	74559-1
		Virox Technologies Intervention Farm Animal Care Disinfectant Cleaner & Deodorizer	5	74559-4
		Virox Technologies Rejuvenate Concentrate One-Step Disinfectant Cleaner for Use in Spas, Salons And Clinics	5	74559-4
		Virox Technologies Rejuvenate Concentrate Ready to Use Disinfectant Cleaner for Use in Spas, Salons And Clinics	1	74559-1
		Virox Technologies Rejuvenate Concentrate Ready to Use Wipes One-Step Disinfectant Cleaner for Use in Spas, Salons And Clinics	1	74559-3

*Note: There may be more than one product name associated with an EPA registration number. Every disinfectant product label will include its EPA registration number – if the number on your product matches one on this list, the product is certified by EPA to be effective against COVID-19.

ORGANIZING ADVICE

First things first, you're doing a great job simply by reading through this toolkit!

Many times we are led to believe that certain disinfecting products are the safest for us and those around us. However, there is much to learn and to share to protect ourselves, other students, custodian workers, educators, and everyone we care about.

You can start small! Throw a Green Party with Friends!

A Green Cleaning Party is a fun get together with friends to make non-toxic cleaners from safe ingredients like vinegar and baking soda to take action in your immediate circle.

Find DIY non-toxic recipes here: <https://www.womensvoices.org/diy-recipes/>

Join the PAQ Action Group!

People Against Quats (PAQ) is a national action group of concerned people who are working to eliminate or reduce public exposure to quats in places like schools, gyms, apartment buildings and public work places.

Learn more at: <https://www.womensvoices.org/PAQ>

Connect with your school administrators!

Send the letter on page 1 and encourage your friends to do the same! Talk one-on-one with your teachers raise awareness about quats in the classroom.

Do NOT forget about custodians and people who help keep our spaces clean!

Connect with custodial workers about safer products. Share the list of approved safer disinfectants for institutions. Although we as students are affected, custodial workers can face serious health dangers due to their proximity to, and daily use of, unsafe products.

REMEMBER: There is power in numbers!

Share this toolkit with as many people as you know. Encourage others to join you in signing-on to your letter, or have others send their own. It's about building connections between all students and custodial workers!

For more information contact Maria Ignacia Miranda Santis at mariaignaciams@womensvoices.org

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