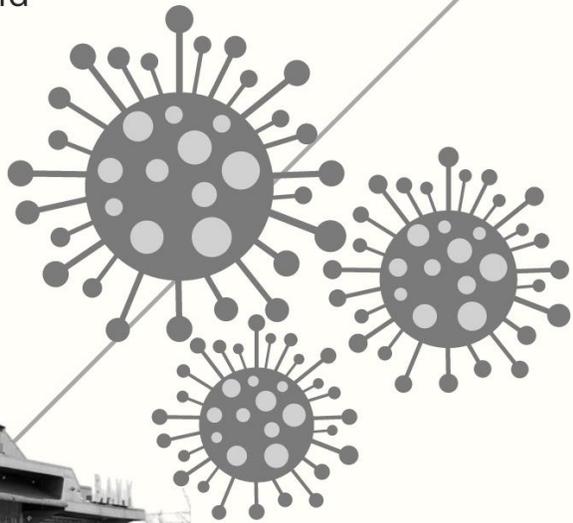


# UNDERSTANDING COVID-19 IN SUPERMARKETS.

The **Top 37 Questions** asked and  
answered by the experts at  
Sterilane™



**smith/osen**  
GAMING PARTITIONS



## 1. When is the pandemic going to go away?

- A. *Forecasting when the coronavirus outbreak will end is difficult, if not impossible. First, because "end" as a definition is not clearly defined. Here, we will use the scientific definition - when the daily death rate drops below 0.3 per million - as the indicator of the end of this pandemic in individual states.*

*Although the development of a vaccine will likely take until at least January 2021, states are using other measures to open up society again. Prediction programs estimate that the spread of COVID-19 on a global scale will be much lower by January 2020; however, with the implementation of social distancing, wearing masks, and antibody/PCR tests, the United States will begin functioning again before there is a vaccine.*

*The key to ending the pandemic is to implement as many anti-Covid technologies and protocols as possible, in order to lower the microbial load of public gathering places.*

*No technology will be effective unless the public cooperates with social distancing protocols, and continues to wear masks in public places.*

## 2. Did the pandemic effect the supply chain for groceries?

- A. *Ultimately, the supply the chain didn't break, but some vulnerabilities were revealed — and exposed to consumers — as excess agricultural products ended up being destroyed, certain products became obsolete seemingly overnight and e-commerce programs were suddenly being used more than ever before, revealing a gap in different retailers' levels of preparedness.<sup>1</sup>*

## 3. How many people *really* clean their groceries when they get home?

- A. *It is estimated that over 70% of retail customers participate in a regimen of "disinfecting" or "Cleaning" their groceries when they arrive home from the supermarket. However, not all of these cleaning techniques are effective, or even safe.*

## 4. Can a sanitized grocery cart really keep me safe?

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<sup>1</sup> <https://progressivegrocer.com/supply-chains-pandemic-playbook>

- A. *No, various machines that sanitize grocery carts completely sanitize the cart, however, the cart becomes contaminated the moment another person breathes on it, or the minute the consumer places a product in it. The cart remains disinfected only momentarily. UVC light does not have any lingering or lasting antimicrobial properties. Customers aren't taking home the cart.*

**5. What is an Asymptomatic carrier?**

- A. *An asymptomatic carrier is an individual infected with SARS-CoV-2, who does not exhibit symptoms during the course of infection.*

**6. Is influenza a virus or bacteria?**

- A. *Influenza, commonly known as the flu, is a virus.*

**7. Flu season is coming, can people get Covid-19 and the flu, at the same time?**

- A. *The novel coronavirus and influenza viruses can cause some of the same symptoms—such as fever, cough and fatigue—these similarities are mostly superficial. The pathogens use different receptors on cells to gain access to our bodies. As a result, SARS-CoV-2 could enter one way, while a flu virus slips in another.*

*A study of about 1,200 patients, conducted in northern California and published in JAMA in April, found that one in five people who were diagnosed with COVID-19 were co-infected with another respiratory virus.*

*The risk of such coinfections is typically low, however It is possible you could get infected with both at the exact same time, this can be especially deadly for high risk individuals.*

**8. What is the difference between viruses and bacteria?**

- A. *Viruses are completely different from bacteria. A bacterium is a living thing—most bacteria have all of the components they need for their own survival, for making more of themselves, and so on.*

*A virus is just a piece of information. A virus puts its information into a cell—a bacterial cell, a human cell, or animal cell, for example. It contains instructions that tell a cell to make more of the virus itself, in the same way a computer virus getting into a computer tells the computer to make more of itself. Viruses are not living things. Its business is to make more of itself—that's its only job.*

**9. If my temperature is taken at the door, does that mean nobody in the store is sick?**

- A. *No, this simply means that the person subjected to testing does not have a fever. This means that the people in the store are healthy or asymptomatic carriers of Covid-19.*

**10. Is Coronavirus alive?**

- A. *Viruses are not living organisms—they can't carry out on their own any of the functions that we consider to be connected with life. They don't contain the ability to replicate themselves without being inside of a cell.*

*They have the information, but the information is dependent on having a cell to translate that information into the components that then become part of the virus particle (virion) that carries the information from one cell to the next. Many viruses are very simple, with only a couple of genes. Our cells contain over 20,000 genes, but by comparison HIV, which in a sense is a relatively complex virus, only contains nine genes. Many viruses contain fewer than that—it's a minimum of about two or three.*

**11. How does virus behave?**

- A. *Just like glitter. No matter how careful you are, if you use glitter in your craft project, you are going to spread it all over the place — by touch alone. If you air-kiss someone wearing glitter make-up, you are going to get it on you. If you get it on your hands, cuffs, phone cover, wallet, face mask, then you are going to transmit glitter to other people you meet and touch. And you'll do all of those things unconsciously, even if you make a real effort to keep it contained and vacuum your craft space. Covid-19 is the same.*

*The finest glitter particles are 200 microns in size. That's way bigger than the droplets that we create when we cough or sneeze (or snot all over ourselves). And yet they are highly, highly transferable.*

*One big difference is that glitter is forever — plastic glitter will take a thousand years to break down — whereas particles of SARS-CoV-2 will break apart under UVC light, and can be inactivated fairly quickly when deposited on surfaces.*

*Another big difference is that glitter spread ceases when its point source is exhausted, whereas Covid-19 can keep infecting new hosts and creating new sources.*

**12. What is in those mists that supermarkets are using to disinfect groceries? Do they really work?**

- A. *Electrostatic spray disinfection systems turn disinfectant liquid (e.g., quaternary ammonium compounds) into aerosols and then apply a charge to each droplet so that they are attracted to surfaces through electrostatic forces which are greater than gravity.*

*It is not clear whether electrostatic spraying is more effective than conventional surface disinfection methods for COVID-19.*

*The US Environmental Protection Agency evaluated the effectiveness of electrostatic sprayers in decontaminating PPE for first responders in a hypothetical situation of responding to a bioterror event.*

*Electrostatic sprayers were compared to traditional backpack sprayers for removing or inactivating spores of *Bacillus atrophaeus* var. *globigii* (Bg), a surrogate for *Bacillus anthracis*, from different types of personal protective equipment (PPE) materials, using a standardized solution of 10% Clorox® Concentrated Germicidal Bleach.*

*Given that anthrax spores are much more resistant to disinfection than coronaviruses, it is likely that application of this bleach product by this method would also disinfect coronaviruses.*

*Spray disinfection systems are ideally suited for floor and shelving, but are not effective at disinfecting product packaging.*

**13. What exactly is UVC?**

- A. *Ultraviolet (UV) light is produced by the sun, mercury bulbs, and light emitting diodes. There are three types of UV light—UVA, UVB, and UVC. UVC light has the most energy of the three types. This energy destroys the genetic material inside viruses and other microbes. UVC light has been used safely for disinfection for over 100 years to sanitize water, objects such as laboratory equipment, and spaces such as buses and airplanes. For more on the science of UVC [click here](#).*

**14. Are all masks the same?**

- A. *No, see chart.*

**15. My supermarket uses a UVC Robot, will that keep me safe?**

- A. *No. UVC Robots do a remarkable and thorough job of disinfecting the face of the first product on a shelf. Once that product is removed, the product behind it is subject to contamination by a consumer or employee.*

**16. Why has wearing a mask become a political issue?**

- A. *Some people are starting to view masks as a symbol of social conformity. As such, these individuals refuse to follow state mandates concerning social distancing and wearing PPE in public.*

**17. Can I catch covid-19 from handling cash?**

- A. *Yes.*

**18. Can I catch Covid-19 from touching retail products?**

- A. *Yes, Respiratory secretions or droplets expelled by infected individuals can contaminate surfaces and objects, creating fomites (contaminated surfaces and objects). Viable SARS-CoV-2 virus and/or RNA detected by RT-PCR can be found on those surfaces for periods ranging from hours to days, depending on the ambient environment (including temperature and humidity) and the type of surface, in particular at high concentration in supermarkets. Therefore, transmission may also occur indirectly through touching surfaces in the immediate environment or objects contaminated with virus from an infected person (cans, jars, boxes, plastic containers), followed by touching the mouth, nose, or eyes. Additionally, virus particles may be “disengaged” from an object by moving the object, and be inadvertently inhaled if not wearing a proper mask.*

**19. Can I get Covid-19 from eating food that contained active virus?**

- A. *No, there is no evidence that the novel coronavirus can be acquired through eating contaminated food. What we know about SARS-CoV-2 [the virus that causes the fast-spreading disease COVID-19] is that it's transmitted via respiratory droplets. That means it needs to get into your respiratory tract to cause infection. In contrast, foodborne viruses are transmitted by the fecal-oral routes – you actually have to eat those particular viruses, like norovirus or hepatitis B, in order to get an infection.*

**20. What products do we know for a fact kill the coronavirus?**

A. *UVC Light (264-280 NM)*

1. *Lysol Disinfectant Spray*

*Active ingredient: Quaternary ammonium; Ethanol (Ethyl alcohol)*  
*EPA registration number: 777-99*

2. *Lysol Disinfectant Max Cover Mist*

*Active ingredient: Quaternary ammonium; Ethanol (Ethyl alcohol)*  
*EPA registration number: 777-127*

3. *Lysol Disinfecting Wipes (All Scents)*

*Active ingredient: Quaternary ammonium*  
*EPA registration number: 777-114*

4. *Lonza Formulation R-82*

*Active ingredient: Quaternary ammonium*  
*EPA registration number: 6836-78*

5. *Lonza Formulation S-21*

*Active ingredient: Quaternary ammonium*  
*EPA registration number: 6836-75*

6. *Lonzagard RCS-256 Plus*

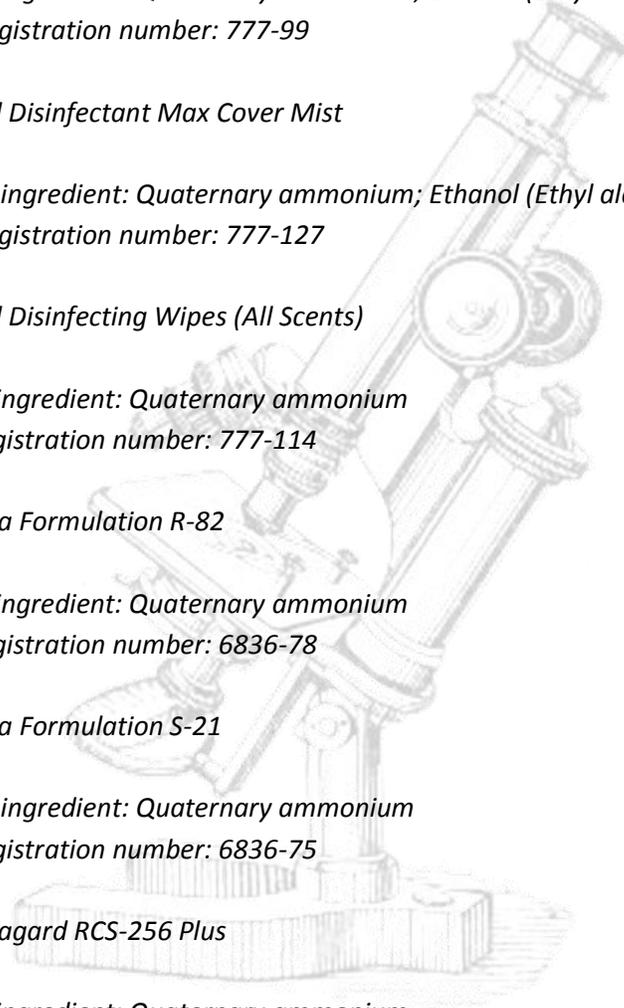
*Active ingredient: Quaternary ammonium*  
*EPA registration number: 6836-349*

7. *Lonzagard RCS-128 PLUS*

*Active ingredient: Quaternary ammonium*  
*EPA registration number: 6836-348*

8. *Lonzagard RCS-128*

*Active ingredient: Quaternary ammonium*



*EPA registration number: 6836-347*

*9. Lonzagard RCS-256*

*Active ingredient: Quaternary ammonium*

*EPA registration number: 6836-346*

*10. Lonza Formulation R-82F*

*Active ingredient: Quaternary ammonium*

*EPA registration number: 6836-139*

*11. Lonzagard R-82G*

*Active ingredient: Quaternary ammonium*

*EPA registration number: 6836-381*

*12. Lonza Formulation S-18*

*Active ingredient: Quaternary ammonium*

*EPA registration number: 6836-77*

*13. Lonza Formulation DC-103*

*Active ingredient: Quaternary ammonium*

*EPA registration number: 6836-152*

*14. Lonza Formulation S-21F*

*Active ingredient: Quaternary ammonium*

*EPA registration number: 6836-140*

*15. Lonza Formulation S-18F*

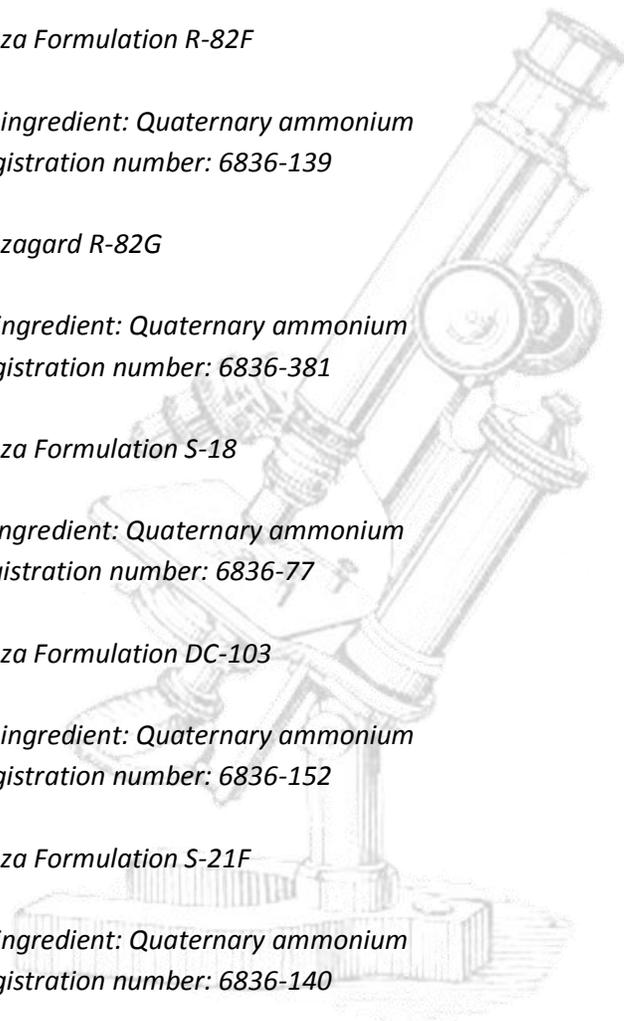
*Active ingredient: Quaternary ammonium*

*EPA registration number: 6836-136*

*16. Lonza Disinfectant Wipes*

*Active ingredient: Quaternary ammonium*

*EPA registration number: 6836-313*



17. *Lonza Nugen Low Streak Disinfectant Wipes*

*Active ingredient: Quaternary ammonium*

*EPA registration number: 6836-382*

18. *Lonza Disinfectant Wipes Plus*

*Active ingredient: Quaternary ammonium*

*EPA registration number: 6836-336*

19. *Lonza Disinfectant Wipes Plus 2*

*Active ingredient: Quaternary ammonium*

*EPA registration number: 6836-340*

20. *Lysol Laundry Sanitizer*

*Active ingredient: Quaternary ammonium*

*EPA registration number: 777-128*

21. *Clorox Commercial Solutions Clorox Disinfecting Wipes*

*Active ingredient: Quaternary ammonium*

*EPA registration number: 67619-31*

22. *Clorox Disinfecting Wipes*

*Active ingredient: Quaternary ammonium*

*EPA registration number: 5813-79*

23. *The Clorox Company's CDW*

*Active ingredient: Quaternary ammonium*

*EPA registration number: 5813-113*

24. *CloroxPro Clorox Germicidal Bleach*

*Active ingredient: Sodium hypochlorite*

*EPA registration number: 67619-32*

25. *The Clorox Company's Tuck 3 (Pine-Sol Original Multi-Surface Cleaner)*



*Active ingredient: Glycolic acid*  
*EPA registration number: 5813-101*

*26. Spartan Chemical Company Inc.'s NABC*

*Active ingredient: Quaternary ammonium*  
*EPA registration number: 5741-18*

*27. Midlab's HP202*

*Active ingredient: Hydrogen peroxide*  
*EPA registration number: 45745-11*

*28. Clorox Healthcare Bleach Germicidal Wipes*

*Active ingredient: Sodium hypochlorite*  
*EPA registration number: 67619-12*

*29. Stepan Company's Detergent Disinfectant Pump Spray*

*Active ingredient: Quaternary ammonium*  
*EPA registration number: 1839-83*

*30. Lysol Kitchen Pro Antibacterial Cleaner*

*Active ingredient: Quaternary ammonium*  
*EPA registration number: 777-91*

*31. Lysol Brand All Purpose Cleaner*

*Active ingredient: Quaternary ammonium*  
*EPA registration number: 777-66*

*32. Dr J's Surface Disinfectant*

*Active ingredient: Quaternary ammonium*  
*EPA registration number: 97092-1*

**21. Does Covid-19 travel in the air?**

- A. *Yes, this is called Airborne transmission, and is defined as the spread of an infectious agent caused by the dissemination of droplet nuclei (aerosols) that remain infectious*

*when suspended in air over long distances and time. Airborne transmission of SARS-CoV-2 has been discovered to occur during normal human discourse in retail environments such as super-markets.*

*The physics of exhaled air and flow physics have generated hypotheses about possible mechanisms of SARS-CoV-2 transmission through aerosols, specifically in indoor, retail environments. These theories suggest that:*

*A number of respiratory droplets generate microscopic aerosols (<5  $\mu\text{m}$ ) by evaporating, and normal breathing and talking results in exhaled aerosols.*

*Thus, a susceptible person could inhale aerosols, and could become infected if the aerosols contain the virus in sufficient quantity to cause infection within the recipient.*

*However, the proportion of exhaled droplet nuclei or of respiratory droplets that evaporate to generate aerosols, and the infectious dose of viable SARS-CoV-2 required to cause infection in another person are not known, but it has been studied for other respiratory viruses.*

**22. Is it safe to bring my kids to the supermarket?**

A. *No, it is advisable to leave children under 10 at home.*

**23. Do these plastic partitions keep me safe? Why are they there anyway?**

A. *Yes, plastic partitions are widely used to shield employees from virus droplets, but must be cleaned regularly in order to insure they do not become a "petri-dish" for viruses and other bacteria. Partitions should be cleaned after every customer in order to remain safe.*

**24. What is fomite transmission?**

A. *Fomite Transmission is the acquisition and transmission of virus through touch. Fomite exposure requires an inanimate object to carry a pathogen from one susceptible organism to another. Fomite exposure often involves a secondary route of exposure such as oral or direct contact for the pathogen to enter the host.*

**25. Are my Groceries safe if I have them delivered?**

- A. *It depends on whether a disinfection regimen takes place at the store prior to delivery. It is impossible to know, or tell by looking at a product's packaging if it is or is not contaminated with active or inactive viruses.*

**26. Is contactless delivery really contactless?**

- A. *No, because the customer has no idea who handled their groceries. Where the consumer may not have contact with the delivery driver, the consumer is making contact with the merchandise purchased, which may or may not be contaminated.*

**27. Can Coronavirus really "live" on retail products?**

- A. *Yes, where the virus isn't technically "alive", viable Coronavirus has been found repeatedly on product packaging in numerous stores across the United States.*

**28. What are the key marketing points for consumers during the pandemic?**

- A. *Safety Technology and Social Distancing Protocols are now of far more interest to the average consumer, than any economic factors.*

**29. If Social Distancing and Masks are so important, why doesn't my local supermarket distribute Masks and Gloves free of charge?**

- A. *Where social distancing protocols are being suggested by State and Local Governments, there are very few legal mandates in place that require retailers to provide PPE to their customers.*

**30. Do face shields prevent the transmission and acquisition of disease in a retail environment?**

- A. *No, face shields are completely ineffective at protecting people from Covid-19.*

**31. Can UVC light damage or affect the taste of produce?**

- A. *No.*

**32. Is it better to pay cash or use a credit card during a pandemic?**

- A. *Credit card*

**33. Should customers be given a choice between a lane that sterilizes groceries, and a self-checkout lane that is faster, that doesn't?**

- A. *No. In order for any anti-covid technology and protocol to be effective it must be utilized throughout the store. This is the only way to truly gauge the effectiveness of both the technology and accompanying safety protocol.*

### **34. Can Grocery chains be held legally liable for customers that get sick?**

- A. *Heeding warnings of public health experts, countless people across the globe have adopted “shelter-in-place” practices, working or continuing their education from home, only venturing into the outside world when absolutely necessary. With such a dramatic shift in daily living, more people are turning to internet-based delivery services, particularly for grocery and restaurant delivery. Although there is presently no evidence to suggest that the virus is spread through food or drink, the bags, boxes and other containers that carry these deliveries could also be carrying the active contagion on their surfaces—even if the contaminating contact was days earlier.*

*As the nature and extent of the virus become clearer over time, we can anticipate a surge in litigation in the wake of COVID-19, with potentially many cases claiming contaminated food packaging. These cases will present unique challenges of proof that are not always present (or analogous) in established contaminated food case law. For example, there are signature incubation periods and symptoms for food-borne pathogens like salmonella and e-coli, whereas COVID-19 presents a more elusive incubation timeframe and may not always manifest with consistent symptoms. Tracing the source of one’s infection, whether in a densely populated urban center like New York City—or even in more rural regions—is not going to be simple in the ordinary course. Alternative causation arguments will abound, particularly as many of the people who have contracted COVID-19 will be, and are, asymptomatic yet contagious. Proving causation will therefore likely be the most common challenge faced by plaintiffs bringing lawsuits against major suppliers, distributors, and retailers.*

*In the realm of product liability, the presence of an unexpected contaminant (e.g., a virus), can often be deemed a defect under the law of most states. Where an item of food or drink intended for human consumption is sold, an implied warranty is commonly imposed on the manufacturer that the item is fit for human consumption and free from any harmful or unwholesome substances, when it leaves the manufacturer’s control. Of course, a plaintiff has to prove the existence of the defect at the time it left the hands of the defendant. Questions of due care are usually immaterial, as are questions of whether the defect can be eliminated with the use of reasonable care. This is in the category of true “strict liability,” a form of manufacturing defect.*

*In the realm of premises liability, novel questions of negligence are also presented, guided by existing standards of reasonable care. What steps must be taken to maintain social distancing in the store aisles and at the registers? Must employees wear gloves? Masks? Should stores provide special shopping hours for the most “at-risk” in our population? Should any stores continue to operate on a self-service model at all (such models are a relatively recent innovation—approximately 70 years), or only use curbside pickup and/or home delivery?*

*Similar questions are presented with distribution and delivery from retailers. If boxes and plastic surfaces can retain COVID-19 contagions, should these surfaces be wiped down prior to placement on the delivery truck? Should they be wiped down again before leaving them by the homeowner’s front door? Considering many more people now depend on delivery services—including healthcare providers and those who are already sick—would the added requirement cause a breakdown in efficiency that would do more harm than good? With the current unprecedented shortage of disinfecting agents, should hospitals and other healthcare facilities be prioritized in the distribution of these vital materials?*

*We have barely scratched the surface of the potential chain of distribution and liability issues arising from the current national crisis. While the fundamental questions may remain without definitive answers for some time, business leaders may want to pay close attention to their written policies, employee training, vendor contracts, and public communications, among many possible sources of evidence in future cases. Also, while ever-changing Federal and State advisories and mandates may set a floor for reasonable conduct, businesses may look as well to what competitors are doing. Industry practice can serve to raise the bar for what is acceptable conduct, and often does when practices are challenged in front of juries.<sup>2</sup>*



### **35. Are anti-Covid technologies tax deductible?**

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<sup>2</sup> 1. <https://www.nytimes.com/2020/03/31/health/coronavirus-asymptomatic-transmission.html> 2. <https://www.cdc.gov/coronavirus/2019-ncov/hcp/faq.html> 3. <https://www.npr.org/sections/health-shots/2020/03/31/824155179/cdc-director-on-models-for-the-months-to-come-this-virus-is-going-to-be-with-us> 4. [https://www.nejm.org/doi/full/10.1056/NEJMc2004973?query=featured\\_home](https://www.nejm.org/doi/full/10.1056/NEJMc2004973?query=featured_home) 5. UCC 2-314; Hohn v South Shore Servs., 141 AD2d 504 (2nd Dept.1988). 6. Tardella v RJR Nabisco, Inc., 178 A.D.2d 737 (3rd Dept. 1991); Kotiadis v Gristede Bros., 20 A.D.2d 689, 690 (1st Dept. 1964). 7. E.g. Basso v. Miller, 40 N.Y.2d 233 (1976). 8. E.g. Emergency standards adopted in New York – <https://www.wsj.com/articles/new-york-moves-to-shield-doctors-from-lawsuits-while-fighting-coronavirus-11585868982>.

- A. *The Coronavirus Aid, Relief, and Economic Security Act (the CARES Act), features significant tax provisions and other measures to assist impacted individuals and businesses.*
- *For a 35-page Senate staff summary of the overall CARES Act, click [here](#). For a six-page Senate Finance Committee staff summary of the Act's tax and unemployment assistance provisions, click [here](#). For the CARES Act text, click [here](#).*
  - *For a Senate staff summary of the emergency supplemental appropriations bill, click [here](#). For appropriations bill text, click [here](#).*
  - *For an IRS summary of filing and payment deadlines questions and answers, click [here](#). For IRS guidance updates on coronavirus tax relief, click [here](#).*

**36. Is it wise for customers to save their plastic bags in the age of Coronavirus?**

- A. *No, any microscopic virus or bacteria particles that were on the items purchased in the store, are now in, and on your bags. The best thing to do is to discard your used bags.*

**37. What is herd immunity? And how close are we to it?**

- A. *The threshold for achieving herd immunity for COVID-19 is the percentage of a population that needs to develop immunity to disease to prevent sustained future transmission. Once the threshold is reached, the whole population is protected. A basic formula for estimating that threshold is one minus the reciprocal of the basic reproductive number<sup>3</sup>.*

*The most likely time for the United States to achieve herd immunity is the third or fourth quarter of 2021. As we wrote in July 2020, one or more vaccines may receive US Food and Drug Administration Emergency Use Authorization before the end of*

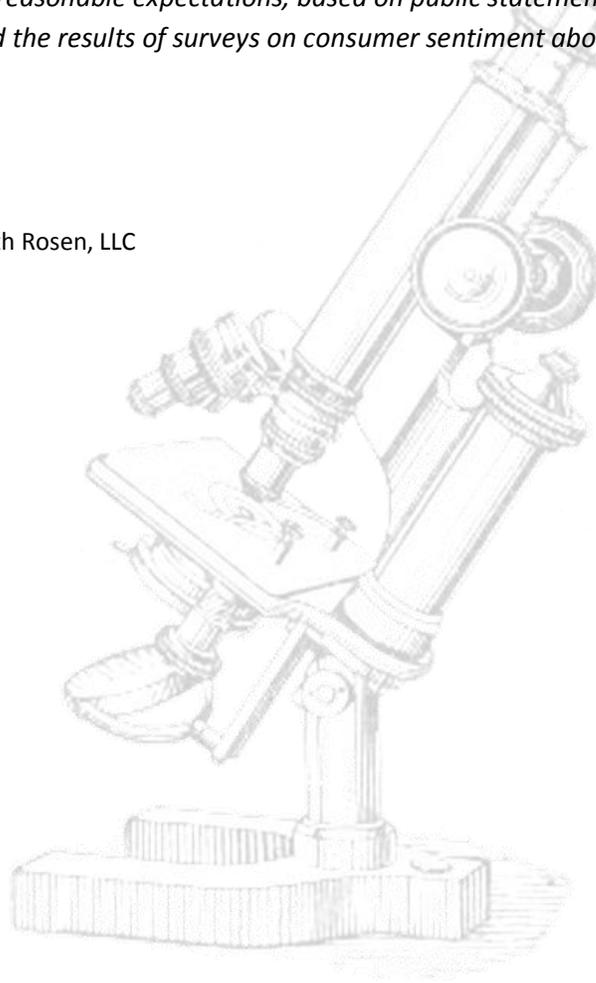
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<sup>3</sup> The basic reproductive number (R0) is a measure of contagiousness or transmissibility. For COVID-19, it can be generally thought of as the expected number of cases directly generated by a single case in a population in which all people are susceptible. The R0 value for COVID-19 is under debate, with estimates ranging from two to four. For an example of a low-end estimate, see Max Fisher, "R0, the messy metric that may soon shape our lives, explained," *New York Times*, April 23, 2020, nytimes.com. For an example of a high-end estimate, see Seth Flaxman et al., "Estimating the effects of non-pharmaceutical interventions on COVID-19 in Europe," *Nature*, August 13, 2020, Volume 584, pp. 257–61, nature.com.

*2020 (or early in 2021) and the granting of a Biologics License Application (also known as approval) during the first quarter of 2021.*

*Vaccine distribution to a sufficient portion of a population to induce herd immunity could take place in as few as six months. That will call for rapid availability of hundreds of millions of doses, functioning vaccine supply chains, and peoples' willingness to be vaccinated during the first half of 2021. We believe that those are all reasonable expectations, based on public statements from vaccine manufacturers and the results of surveys on consumer sentiment about vaccines.”<sup>4</sup>*

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<sup>4</sup> - <https://www.mckinsey.com/industries/healthcare-systems-and-services/our-insights/when-will-the-covid-19-pandemic-end>