Aaron is active in sports and music in high school and is concerned about staying healthy during the cold and flu season. Due to a busy schedule, Aaron often ends up eating on the go. Although hand sanitizers are not a substitute for soap and water, they come in handy in public places and on the go when soap and water are not available.

Aaron knows that according to the Center for Disease Control (CDC), hand sanitizers must contain at least 60 percent alcohol to be effective in killing most bacteria. Alcohol-based hand sanitizers eliminate the widest range of microbes, they’re gentler on skin than soap, and when used under supervision they’re even safe for kids. Aaron wants to avoid sanitizers that contain Triclosan, because experts say that the antibacterial agent Triclosan, commonly found in antibacterial soaps and cleansers, can potentially increase bacterial resistance to antibiotics. A convenient travel size container would make it easy to carry the sanitizer in his duffle bag. During the winter Aaron often gets dry skin and a sanitizer that contains moisturizers would be helpful to keep his skin hydrated.

Aaron hopes to find a low cost, affordable hand sanitizer that will be convenient to carry on the go. What hand sanitizer should Aaron purchase?

Criteria:

1. Ingredients – at least 60% alcohol content with no Triclosan
2. Convenient size for travel
3. Moisturizer
4. Cost
Hand Sanitizers
Senior

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Aaron hopes to find a low cost, affordable hand sanitizer that will be convenient to carry on the go. What hand sanitizer should Aaron purchase?
#1
Purell Instant Hand Sanitizer

- Cost: $2.99 for 3 fl. oz.
- Kills 99.99% of most common germs that make you sick
- Active Ingredient: 62% ethyl alcohol
- No dye or heavy scent (regular version)
- Leaves hands feeling soft and refreshed with moisturizers and vitamin E
- Dermatologist tested, hypoallergenic formula
- Flexible, lightweight bottle fits pockets and pouches
- Durable bottle - tough enough to be standard military issue and great for active outdoor lifestyles
- Special side grips for easy one-handed dispensing
- Withstands temperature extremes
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#3

**Dr. Bronner**

66671 Hand Sanitizer Spray Lavender

- Cost: $3 for 2 oz.
- Active Ingredient: 62% Organic Ethanol alcohol from *non-GMO* grain
- Moisturizer: Organic Glycerin
- Scent: Organic Lavender Oil
- Over 500 sprays
#4

**Cleanwell Hand Sanitizer**

- Cost: $1 for 1 fl oz. spray
- Active Ingredient: Naturally Antibacterial Thyme Oil
- Kills germs and alcohol-free
- Gentle on sensitive skin with aloe vera, a natural emollient and skin conditioner
- Readily Biodegradable with no harsh chemicals
- Fresh pleasant scent
- Kid safe formula, never tested on animals
- Leaves skin soft

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Hand Sanitizers
Official Placing

Placing: 1-3-4-2
Cuts: 1-3-1

I place this class of hand sanitizers 1-3-4-2.

In the top of this class I place item #1, the Purell sanitizer because it is the only item to match all of the criteria mentioned for this class; ingredients, convenient size, moisturizers and low cost.

In the top pair I place item #1 over item #3. Item #1 - Purell sanitizer is lower in cost per ounce than item #3 – Dr. Bronner spray sanitizer at $.99 compared to $1.50. I grant that both items meet the criteria for active ingredients, convenient containers and include moisturizers while item #3 may be considered a more convenient container being a hand spray container of only 2 ounces.

In my middle pair, I place item #3 over item #4. Item #3 – Dr. Bronner spray sanitizer matches the criteria of at least 60% alcohol with 62% Ethyl Alcohol. Both items can be considered available in convenient containers and containing moisturizers. I grant that item #4 – Cleanwell Sanitizer spray costs less at only $1 per 1oz. container.

In bottom pair, I place item #4 over item #2. Item #4 – Cleanwell Spray matches three of the desired criteria; convenient size, contains moisturizer and low cost while item #2 only matches two of the criteria; convenient size and moisturizing. I grant that item #2 – Gold Bond contains Bezethonium Chloride which is a known to kill bacteria, but fault it as Bezethonium Chloride was developed as a first aide compound designed for treating open surface wounds and not for general hand washing.

For these reasons, I place this class of hand sanitizers 1 – 3 – 4 – 2.
Hand Sanitizers
Questions

1. Which was the most expensive sanitizer per container? 

2. Which sanitizer is available in Lavender Scent? 

3. Which item’s container featured special side grips for easy one-handed dispensing? 

4. Which item was made of organic ingredients? 

5. Which item had Thyme Oil as an active ingredient?
Hand Sanitizers
Questions Answer

1. Which was the most expensive sanitizer per container? #2

2. Which sanitizer is available in Lavender Scent? #3

3. Which item’s container featured special side grips for easy one-handed dispensing? #1

4. Which item was made of organic ingredients? #3

5. Which item had Thyme Oil as an active ingredient? #4