



# LEMON MINT PINE QUAT



**ONE-STEP DISINFECTANT, GERMICIDAL DETERGENT  
AND DEODORANT**

for use against SARS-CoV-2



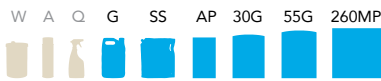
*The US Environmental Protection Agency (EPA) has approved Buckeye Sanicare Lemon, Mint and Pine Quat for use against SARS-Related Coronavirus 2 (SARS-CoV-2) [cause of COVID-19] with a one-minute contact time at a 2 oz./gal. dilution rate.*

## The Sanicare LMP Quat Difference

**Sanicare Lemon, Mint and Pine Quats** are multi-purpose, germicidal cleaners that offer one-step cleaning, disinfecting and deodorizing for washable, hard, nonporous surfaces.

**Sanicare Lemon, Mint and Pine Quats** are used at 2 oz. per gallon dilution, require no rinsing, and are pH neutral for use on floor finishes.

### Available Packaging



\*Only Sanicare Lemon Quat is available in Smart Sacs

*Effectively Kills: HIV-1 (AIDS virus) • HBV (Hepatitis B Virus) • HCV (Hepatitis C Virus) • Herpes Simplex 1 & 2 • German Measles • Athlete's Foot Fungus • Influenza • Vancomycin Resistant Enterococcus faecalis (VRE) • Methicillin Resistant Staphylococcus aureus (MRSA) • Community Associated Methicillin-Resistant Staphylococcus aureus (CA-MRSA) • Human Coronavirus • Rotavirus • Vaccinia • Adenovirus • Pandemic 2009 H1N1 Influenza A Virus (formerly called swine flu) • Gram-negative & Gram-positive pathogens*

## FEATURES

- Germicidal
- Bactericidal
- Fungicidal
- Virucidal\*
- Mildewstatic
- Pseudomonacidal
- Salmonellacidal
- Staphylocidal
- Effective in hard water up to 200 ppm in the presence of 5% organic serum
- Economical
- pH neutral
- Safe on floor finish
- E.P.A. Registered
- Easy-to-use
- For use on washable, hard, nonporous surfaces
- Leaves a clean, fresh scent

## Sanicare Lemon, Mint & Pine Quat is designed for use in:

- Hospitals
- Health Care facilities/Nursing homes
- Commercial & industrial institutions
- Medical offices
- Dental offices
- Day care centers
- Schools/Colleges/Universities
- Federally inspected meat and poultry plants (non-food contact surfaces)
- Athletic facilities
- Correctional facilities
- Kennels
- Hotels/Motels
- Office buildings
- Public restrooms
- Airports

For more information about Lemon, Mint & Pine Quat, scan this code.



## Bactericidal Gram-Negative

Bactericidal against several gram-negative pathogens, according to the AOAC Use Dilution Test (current edition), modified in the presence of 5% organic serum and 200 ppm water hardness (calculated as CaCO<sub>3</sub>). Dilution 1:64

| Organism                    | Sample | # Carriers | # of Positives | Neutralization Control |
|-----------------------------|--------|------------|----------------|------------------------|
| Pseudomonas aeruginosa      | A      | 60         | 0              | +                      |
|                             | B      | 60         | 0              | +                      |
|                             | C      | 60         | 0              | +                      |
| Salmonella choleraesuis     | A      | 60         | 0              | +                      |
|                             | B      | 60         | 0              | +                      |
|                             | C      | 60         | 0              | +                      |
| Enterobacter aerogenes      | A      | 10         | 0              | +                      |
|                             | B      | 10         | 0              | +                      |
| Enterobacter cloacae        | A      | 10         | 0              | +                      |
|                             | B      | 10         | 0              | +                      |
| Salmonella enteritidis      | A      | 10         | 0              | +                      |
|                             | B      | 10         | 0              | +                      |
| Salmonella typhimurium      | A      | 10         | 0              | +                      |
|                             | B      | 10         | 0              | +                      |
| Salmonella typhi            | A      | 10         | 0              | +                      |
|                             | B      | 10         | 0              | +                      |
| Legionella pneumophila      | A      | 10         | 0              | +                      |
|                             | B      | 10         | 0              | +                      |
| Klebsiella pneumoniae       | A      | 10         | 0              | +                      |
|                             | B      | 10         | 0              | +                      |
| Proteus vulgaris            | A      | 10         | 0              | +                      |
|                             | B      | 10         | 0              | +                      |
| Proteus mirabilis           | A      | 10         | 0              | +                      |
|                             | B      | 10         | 0              | +                      |
| Serratia marcescens         | A      | 10         | 0              | +                      |
|                             | B      | 10         | 0              | +                      |
| Shigella flexneri           | A      | 10         | 0              | +                      |
|                             | B      | 10         | 0              | +                      |
| Shigella sonnei             | A      | 10         | 0              | +                      |
|                             | B      | 10         | 0              | +                      |
| Escherichia coli            | A      | 10         | 0              | +                      |
|                             | B      | 10         | 0              | +                      |
| Acinetobacter calcoaceticus | A      | 10         | 0              | +                      |
|                             | B      | 10         | 0              | +                      |
| Bordetella bronchiseptica   | A      | 10         | 0              | +                      |
|                             | B      | 10         | 0              | +                      |
| Chlamydia psittaci          | A      | 10         | 0              | +                      |
|                             | B      | 10         | 0              | +                      |
| Fusobacterium necrophorum   | A      | 10         | 0              | +                      |
|                             | B      | 10         | 0              | +                      |
| Listeria monocytogenes      | A      | 10         | 0              | +                      |
|                             | B      | 10         | 0              | +                      |
| Pasteurella multocida       | A      | 10         | 0              | +                      |
|                             | B      | 10         | 0              | +                      |

## Bactericidal Gram-Positive

Bactericidal against several gram-positive pathogens, according to the AOAC Use Dilution Test (current edition), modified in the presence of 5% organic serum and 200 ppm water hardness (calculated as CaCO<sub>3</sub>). Dilution 1:64

| Organism               | Sample | # Carriers | # of Positives | Neutralization Control |
|------------------------|--------|------------|----------------|------------------------|
| Staphylococcus aureus  | A      | 60         | 0              | +                      |
|                        | B      | 60         | 0              | +                      |
|                        | C      | 60         | 0              | +                      |
| Streptococcus pyogenes | A      | 10         | 0              | +                      |
|                        | B      | 10         | 0              | +                      |
| Streptococcus faecalis | A      | 10         | 0              | +                      |
|                        | B      | 10         | 0              | +                      |

## Bactericidal Antibiotic Resistant

Buckeye **Sanicare Lemon, Mint & Pint Quat** is also bactericidal against the following antibiotic resistant bacteria, according to the AOAC Use Dilution Test, in hard water up to 200 ppm (calculated as CaCO<sub>3</sub>) in the presence of 5% organic serum. Dilution 1:64

Enterococcus faecalis-Vancomycin resistant (VRE)

Escherichia coli

Klebsiella pneumoniae

Pseudomonas aeruginosa

Community Associated Methicillin - Resistant

Staphylococcus aureus (CA-MRSA)

Staphylococcus aureus-Methicillin Resistant

(MRSA) and other antibiotic resistant strains

Staphylococcus aureus-Vancomycin Intermediate

Resistant (VISA)

Staphylococcus epidermidis

Streptococcus faecalis

## \*Virucidal

Buckeye **Sanicare Lemon, Mint & Pint Quat** acts as a virucidal against:

HIV-1 (AIDS virus)  
 Hepatitis B Virus (HBV)  
 Hepatitis C Virus (HCV)  
 Herpes Simplex Virus Type 1  
 Herpes Simplex Virus Type 2  
 Human coronavirus  
 Influenza Type A Virus / Hong Kong  
 Adenovirus Type 4  
 Adenovirus Type 7 at 8 oz per gallon  
 Respiratory Syncytial Virus (RSV)  
 Rotavirus  
 Rubella (German Measles)  
 SARS Associated Coronavirus [SARS][cause of Severe Acute Respiratory Syndrome]  
 Vaccinia  
 (Animal Viruses):  
 Avian polyomavirus  
 Canine distemper  
 Feline coronavirus  
 Feline leukemia  
 Feline panleukopenia virus  
 Feline picornavirus  
 Pseudorabies (PRV)  
 Rabies

according to the Virucidal Qualification Test, modified in the presence of 5% organic serum and 200 ppm water hardness (calculated as CaCO<sub>3</sub>). Dilution 1:64

**Note: + = Virus present; 0 = No Virus present; T = Toxic**

## Herpes Simplex Virus Type 2

| Serial Dilutions (Test Virus in 5% V/V Organic Biostress Load) | Treated Diluted with 400 ppm Hard Water | Untreated Test Virus Untreated Control | Cytotoxicity Control |
|--|---|--|----------------------|
| 10 <sup>-1</sup>   | T000                                    | ++++                                   | T000                 |
| 10 <sup>-2</sup>   | 0000                                    | ++++                                   | 0000                 |
| 10 <sup>-3</sup>   | 0000                                    | ++++                                   | 0000                 |
| 10 <sup>-4</sup>   | 0000                                    | ++++                                   | 0000                 |
| 10 <sup>-5</sup>   | 0000                                    | ++++                                   | 0000                 |
| 10 <sup>-6</sup>   | 0000                                    | ++++                                   | 0000                 |
| 10 <sup>-7</sup>   | 0000                                    | ++++                                   | 0000                 |
| 10 <sup>-8</sup>   | 0000                                    | ++++                                   | 0000                 |

Conclusion: Buckeye **Sanicare Lemon, Mint & Pint Quat** effectively inactivated the test virus, Herpes Simplex Virus Type 2.

## \*Virucidal

### Herpes Simplex Virus Type 1; HSV-1, VR-3, Hominis

| Serial Dilutions<br>(Test Virus in 5%<br>V/V Organic<br>Biostress Load) | Treated<br>Diluted with 400<br>ppm Hard Water | Untreated<br>Test Virus<br>Untreated<br>Control | Cytotoxicity<br>Control |
|---|---|---|-------------------------|
| 10 <sup>-1</sup>  | 0000  | ++++  | T000                    |
| 10 <sup>-2</sup>  | 0000  | ++++  | 0000                    |
| 10 <sup>-3</sup>  | 0000  | ++++  | 0000                    |
| 10 <sup>-4</sup>  | 0000  | ++++  | 0000                    |
| 10 <sup>-5</sup>  | 0000  | ++++  | 0000                    |
| 10 <sup>-6</sup>  | 0000  | ++++  | 0000                    |
| 10 <sup>-7</sup>  | 0000  | ++++  | 0000                    |
| 10 <sup>-8</sup>  | 0000  | +000  | 0000                    |

Conclusion: Buckeye **Sanicare Lemon, Mint & Pint Quat** effectively inactivated the test virus, Herpes Simplex Virus Type 1.

### Influenza Virus Type A; Hong Kong/68-H3N2

| Serial Dilutions<br>(Test Virus in 5%<br>V/V Organic<br>Biostress Load) | Treated<br>Diluted with 400<br>ppm Hard Water | Untreated<br>Test Virus<br>Untreated<br>Control | Cytotoxicity<br>Control |
|---|---|---|-------------------------|
| 10 <sup>-1</sup>  | 0000  | ++++  | 0000                    |
| 10 <sup>-2</sup>  | 0000  | ++++  | 0000                    |
| 10 <sup>-3</sup>  | 0000  | ++++  | 0000                    |
| 10 <sup>-4</sup>  | 0000  | ++++  | 0000                    |
| 10 <sup>-5</sup>  | 0000  | ++++  | 0000                    |
| 10 <sup>-6</sup>  | 0000  | ++++  | 0000                    |
| 10 <sup>-7</sup>  | 0000  | ++++  | 0000                    |
| 10 <sup>-8</sup>  | 0000  | ++++  | 0000                    |

Conclusion: Buckeye **Sanicare Lemon, Mint & Pint Quat** effectively inactivated the test virus, Influenza Virus, Type A.

### Adenovirus Type 4

| Serial Dilutions<br>(Test Virus in 5%<br>V/V Organic<br>Biostress Load) | Treated<br>Diluted with 400<br>ppm Hard Water | Untreated<br>Test Virus<br>Untreated<br>Control | Cytotoxicity<br>Control |
|---|---|---|-------------------------|
| 10 <sup>-1</sup>  | 0000  | ++++  | T000                    |
| 10 <sup>-2</sup>  | 0000  | ++++  | 0000                    |
| 10 <sup>-3</sup>  | 0000  | ++++  | 0000                    |
| 10 <sup>-4</sup>  | 0000  | ++++  | 0000                    |
| 10 <sup>-5</sup>  | 0000  | ++++  | 0000                    |
| 10 <sup>-6</sup>  | 0000  | 0000  | 0000                    |
| 10 <sup>-7</sup>  | 0000  | 0000  | 0000                    |
| 10 <sup>-8</sup>  | 0000  | 0000  | 0000                    |

Conclusion: Buckeye **Sanicare Lemon, Mint & Pint Quat** effectively inactivated the test virus, Adenovirus, Type 4.

### Vaccinia Virus; IHD Strain

| Serial Dilutions<br>(Test Virus in 5%<br>V/V Organic<br>Biostress Load) | Treated<br>Diluted with 400<br>ppm Hard Water | Untreated<br>Test Virus<br>Untreated<br>Control | Cytotoxicity<br>Control |
|---|---|---|-------------------------|
| 10 <sup>-1</sup>  | 0000  | ++++  | 0000                    |
| 10 <sup>-2</sup>  | 0000  | ++++  | 0000                    |
| 10 <sup>-3</sup>  | 0000  | ++++  | 0000                    |
| 10 <sup>-4</sup>  | 0000  | ++++  | 0000                    |
| 10 <sup>-5</sup>  | 0000  | ++++  | 0000                    |
| 10 <sup>-6</sup>  | 0000  | ++++  | 0000                    |
| 10 <sup>-7</sup>  | 0000  | ++++  | 0000                    |
| 10 <sup>-8</sup>  | 0000  | 0000  | 0000                    |

Conclusion: Buckeye **Sanicare Lemon, Mint & Pint Quat** effectively inactivated the test virus, Vaccinia.

### Rubella (German Measles) Virus; Strain M-33

| Serial Dilutions<br>(Test Virus in 5%<br>V/V Organic<br>Biostress Load) | Treated<br>Diluted with 400<br>ppm Hard Water | Untreated<br>Test Virus<br>Untreated<br>Control | Cytotoxicity<br>Control |
|---|---|---|-------------------------|
| 10 <sup>-1</sup>  | 0000  | ++++  | T000                    |
| 10 <sup>-2</sup>  | 0000  | ++++  | 0000                    |
| 10 <sup>-3</sup>  | 0000  | ++++  | 0000                    |
| 10 <sup>-4</sup>  | 0000  | ++++  | 0000                    |
| 10 <sup>-5</sup>  | 0000  | ++++  | 0000                    |
| 10 <sup>-6</sup>  | 0000  | 0000  | 0000                    |
| 10 <sup>-7</sup>  | 0000  | 0000  | 0000                    |
| 10 <sup>-8</sup>  | 0000  | 0000  | 0000                    |

Conclusion: Buckeye **Sanicare Lemon, Mint & Pint Quat** effectively inactivated the test virus, Rubella.

**Note:** + = Virus present; 0 = No Virus present; T = Toxic

## Fungicidal

Fungicidal against Trichophyton mentagrophytes (Athlete's Foot fungus), Candida albicans (Yeast) and Aspergillus niger (aspergillosis, pneumonia, skin infections, ear infections) according to the AOAC *Fungicidal Test* (current edition), modified in the presence of 5% organic serum and 200 ppm water hardness (calculated as CaCO<sub>3</sub>). Dilution 1:64

| Organism                    | # Carriers | # of<br>Positives | Control |
|-----------------------------|------------|-------------------|---------|
| Trichophyton mentagrophytes | 20         | 0                 | +       |
| Candida albicans            | 20         | 0                 | +       |
| Aspergillus niger           | 20         | 0                 | +       |



# LEMON MINT PINE QUAT

ONE-STEP DISINFECTANT, GERMICIDAL DETERGENT  
AND DEODORANT

## \*Virucidal

### Human Immunodeficiency Virus (HIV-1)

Evaluation of Buckeye **Sanicare Lemon, Mint & Pine Quat** for virucidal efficacy against dried virus (5% organic soil load) after a 4-minute exposure to a 1:64 dilution in synthetic hard water (400 ppm).

### CPE Assay with MT2 Cells (Day 7)

Cytopathic-Cytotoxic Effects (No. Positive/No. Inoculated)

| Dilution Inoculated  | Virus Control | Sample + Virus |       | Non-Virucidal Level of Disinfectant |       | Cytotoxicity Controls |       |
|--|---------------|----------------|-------|-------------------------------------|-------|-----------------------|-------|
|  |               | Lot A          | Lot B | Lot A                               | Lot B | Lot A                 | Lot B |
| 10 <sup>-1</sup>   | 4/4           | Toxic          | Toxic | Toxic                               | Toxic | 4/4                   | 4/4   |
| 10 <sup>-2</sup>   | 4/4           | Toxic          | Toxic | Toxic                               | Toxic | 4/4                   | 4/4   |
| 10 <sup>-3</sup>   | 4/4           | 0/4            | 0/4   | 4/4                                 | 4/4   | 0/4                   | 0/4   |
| 10 <sup>-4</sup>   | 4/4           | 0/4            | 0/4   | 4/4                                 | 4/4   | 0/4                   | 0/4   |
| 10 <sup>-5</sup>   | 4/4           | a              | a     | 4/4                                 | 4/4   | a                     | a     |
| 10 <sup>-6</sup>   | 2/4           | a              | a     | 0/4                                 | 0/4   | a                     | a     |
| Virus Titer (-Log <sub>10</sub> TCID <sub>50</sub> )                             | 6.0           | ≤2.5           | ≤2.5  | 5.5                                 | 5.5   |                       |       |
| Cytotoxicity Titer (-Log <sub>10</sub> TCID <sub>50</sub> )                      |               |                |       |                                     |       | 2.5                   | 2.5   |
| Reduction of Virus Titer by test sample (-Log <sub>10</sub> TCID <sub>50</sub> ) |               | ≥3.5           | ≥3.5  |                                     |       |                       |       |

a = Virus not tested

Conclusion: Buckeye **Sanicare Lemon, Mint & Pine Quat** demonstrated virucidal activity against HIV-1 (AIDS Virus) in the CPE assay with MT2 cells.

### E.P.A./Health Canada

|              |               |
|--------------|---------------|
| EPA REG. NO. | 47371-131-559 |
| EPA EST. NO. | 559-MO-1      |
| PINE QUAT    | DIN 01962108  |
| MINT QUAT    | DIN 01962078  |
| LEMON QUAT   | DIN 01962051  |

## DIRECTIONS FOR USE:

Disinfects, cleans, and deodorizes the following hard, nonporous, inanimate surfaces: floors, walls, (non-medical) metal surfaces, (non-medical) stainless steel surfaces, glazed porcelain, plastic surfaces (such as polypropylene, polystyrene, acrylic, etc.). Remove heavy soil deposits from surface, then thoroughly wet surface with a use-solution of 2 ounces of the concentrate per gallon of water. (Use 8 oz. per gallon of water to kill Adenovirus Type 7) The use-solution can be applied with a cloth, mop, sponge or coarse spray, or by soaking. For sprayer applications, use a coarse spray device. Spray 6-8 inches from the surface, rub with a brush, cloth or sponge. Do not breathe spray. Let solution remain on surface for a minimum of 10 minutes. Rinse or allow to air dry. Rinsing of floors is not necessary unless they are to be waxed or polished. Food contact surfaces must be thoroughly rinsed with potable water. This product must not be used to clean the following food contact surfaces: utensils, glassware and dishes. Prepare a fresh use-solution daily or more often if the solution becomes visibly dirty or diluted.

### TECHNICAL SPECIFICATIONS

#### BUCKEYE SANICARE LEMON, MINT & PINE QUAT

|   |             |
|---|-------------|
| pH in concentrate   | 7.6 ± 0.2   |
| pH 2 oz./gal.   | 7.0 ± 0.2   |
| Weight/Gallon   | 8.34 lb/gal |
| Specific Gravity  | 1.00        |
| Biodegradable   | Yes         |
| Concentration of Quat @ 2 oz./gal.                                      | 660 ppm     |
| Active Ingredients:   |             |
| Didecyl dimethyl ammonium chloride.....                                 | 2.54%       |
| n-Alkyl (C <sub>14</sub> 50%, C <sub>12</sub> 40%, C <sub>16</sub> 10%) |             |
| dimethyl benzyl ammonium chloride.....                                  | 1.69%       |
| Inert Ingredients.....  | 95.77%      |

## BUCKEYE INTERNATIONAL, INC.

2700 WAGNER PLACE • MARYLAND HEIGHTS • MO 63043 • USA • 800.321.2583

www.buckeyeinternational.com