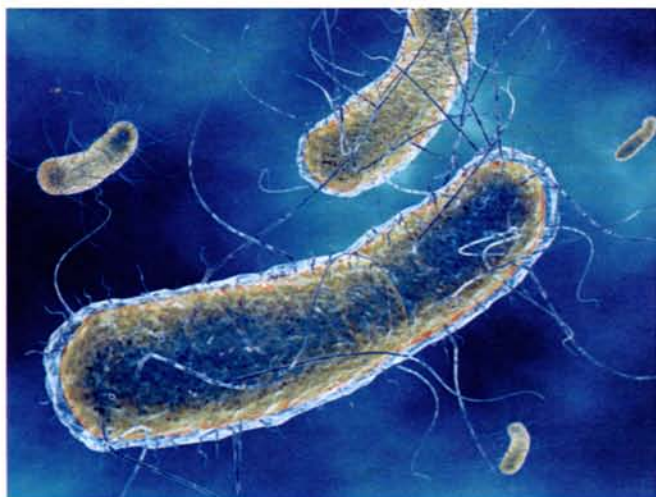


STUDY TITLE: Germicidal and Detergent Sanitizing Action of Disinfectants
PROJECT NUMBER: A09385

PATHOGEN TESTED: *Escherichia coli* (ATCC 11229)



Virulent strains of *E. coli* can cause gastroenteritis, urinary tract infections, and neonatal meningitis. In rarer cases, virulent strains are also responsible for hemolytic-uremic syndrome, peritonitis, mastitis, septicemia and Gram-negative pneumonia.

ANALYSIS

Enagic Super 501 Strong Acidic Water 2.5 pH, Machine 1 (Serial #: 87100333) Lot # 1 and Machine 2 (Serial #: 87100339) Lot # 2 with pre-filter C-1000, demonstrated a >99.999 percent reduction of *Escherichia coli*, following a 30 second exposure time at room temperature (20.0°C) in the presence of a 5% fetal bovine serum organic soil load.

SUMMARY OF RESULTS

Test Substance: Enagic Super 501 Strong Acidic Water 2.5 pH, Machine 1 (Serial #: 87100333) Lot # 1 and Machine (Serial #: 87100339) Lot # 2 with pre-filter C-1000

Test Organism: *Escherichia coli* (ATCC 11229)

Exposure Time: 30 seconds

Exposure Temperature: Room temperature (20.0°C)

Organic Soil Load: 5% fetal bovine serum

EFFICACY RESULTS

Enagic Super 501 Strong Acidic Water 2.5 pH demonstrated efficacy of two lots against *Escherichia coli*, and therefore, meets the requirements set forth by the U.S. EPA for sanitizer label claims following a 30 second exposure time at room temperature (20.0°C) in the presence of a 5% fetal bovine serum organic soil load.

STUDY TITLE: Germicidal and Detergent Sanitizing Action of Disinfectants
PROJECT NUMBER: A09385

PATHOGEN TESTED: *Salmonella typhi*



Salmonella infections can be transferred between humans and non-human animals. Many infections are due to ingestion of contaminated food. Strains of *Salmonella* can cause serious illness, such as *Salmonella enterica subsp. enterica* serovar Typhi. *Salmonella typhi* is adapted to humans and does not occur in other animals.

ANALYSIS

Enagic Super 501 Strong Acidic Water 2.5 pH, Machine 1 (Serial #: 87100333) Lot # 1 and Machine 2 (Serial #: 87100339) Lot # 2 with pre-filter C-1000, demonstrated a >99.999 percent reduction of *Salmonella typhi*, following a 30 second exposure time at room temperature (20.0 °C) in the presence of a 5% fetal bovine serum organic soil load.

SUMMARY OF RESULTS

Test Substance: Enagic Super 501 Strong Acidic Water 2.5 pH, Machine 1 (Serial #: 87100333) Lot # 1 and Machine (Serial #: 87100339) Lot # 2 with pre-filter C-1000

Test Organisms: *Salmonella typhi* (ATCC 6539)

Exposure Time: 30 seconds

Exposure Temperature: Room temperature (20.0 °C)

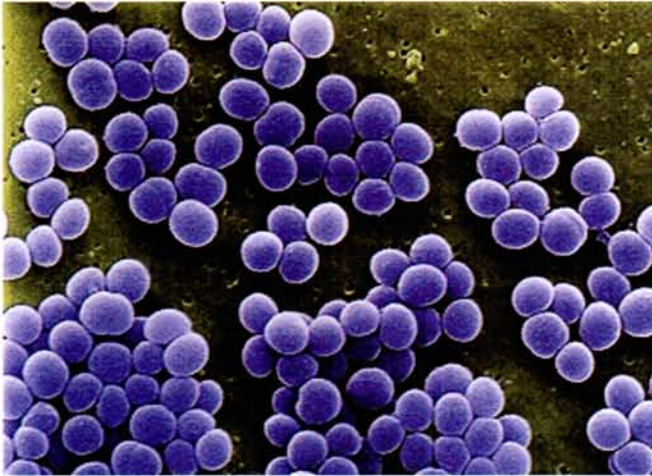
Organic Soil Load: 5% fetal bovine serum

EFFICACY RESULTS

Enagic Super 501 Strong Acidic Water 2.5 pH demonstrated efficacy of two lots against *Salmonella typhi*, and therefore, meets the requirements set forth by the U.S. EPA for sanitizer label claims following a 30 second exposure time at room temperature (20.0 °C) in the presence of a 5% fetal bovine serum organic soil load.

STUDY TITLE: Germicidal and Detergent Sanitizing Action of Disinfectants
PROJECT NUMBER: A09385

PATHOGEN TESTED: *Staphylococcus aureus* (ATCC 6538)



Some strains of *Staphylococcus aureus* produce an enterotoxin that is the causative agent of *Staphylococcus aureus* gastroenteritis. Symptoms include nausea, vomiting, diarrhea, and major abdominal pain.

ANALYSIS

Enagic Super 501 Strong Acidic Water 2.5 pH, Machine 1 (Serial #: 87100333) Lot # 1 and Machine 2 (Serial #: 87100339) Lot # 2 with pre-filter C-1000, demonstrated a >99.999 percent reduction of *Staphylococcus aureus*, following a 30 second exposure time at room temperature (20.0°C) in the presence of a 5% fetal bovine serum organic soil load.

SUMMARY OF RESULTS

Test Substance: Enagic Super 501 Strong Acidic Water 2.5 pH, Machine 1 (Serial #: 87100333) Lot # 1 and Machine (Serial #: 87100339) Lot # 2 with pre-filter C-1000

Test Organism: *Staphylococcus aureus* (ATCC 6538)

Exposure Time: 30 seconds

Exposure Temperature: Room temperature (20.0°C)

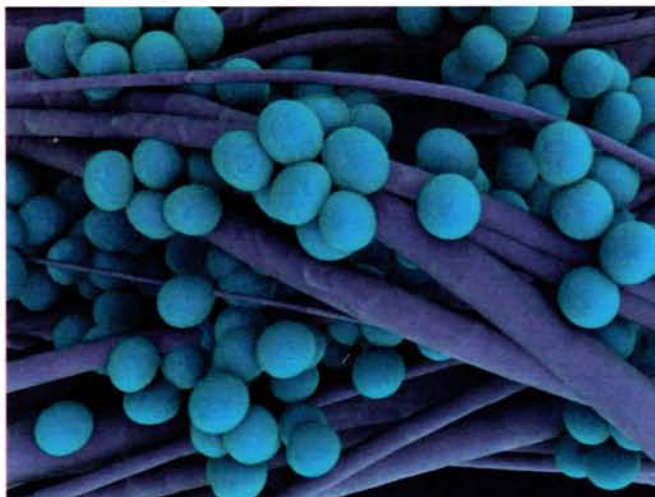
Organic Soil Load: 5% fetal bovine serum

EFFICACY RESULTS

Enagic Super 501 Strong Acidic Water 2.5 pH demonstrated efficacy of two lots against *Staphylococcus aureus*, and therefore, meets the requirements set forth by the U.S. EPA for sanitizer label claims following a 30 second exposure time at room temperature (20.0°C) in the presence of a 5% fetal bovine serum organic soil load.

STUDY TITLE: Germicidal and Detergent Sanitizing Action of Disinfectants
PROJECT NUMBER: A09385

PATHOGEN TESTED: Methicillin Resistant *Staphylococcus aureus* – MRSA (ATCC 33592)



Methicillin-resistant *Staphylococcus aureus* (MRSA) is a bacterium responsible for several difficult-to-treat infections in humans. It is also called multidrug-resistant *Staphylococcus aureus* and oxacillin-resistant *Staphylococcus aureus* (ORSA). MRSA is any strain of *Staphylococcus aureus* that has developed resistance to beta-lactam antibiotics, which include the penicillins (methicillin, dicloxacillin, nafcillin, oxacillin, etc.) and the cephalosporins. The development of such antibiotic resistance makes MRSA infection more difficult to treat with standard types of antibiotics and thus more dangerous.

ANALYSIS

Enagic Super 501 Strong Acidic Water 2.5 pH, Machine 1 (Serial #: 87100333) Lot # 1 and Machine 2 (Serial #: 87100339) Lot # 2 with pre-filter C-1000, demonstrated a >99.999 percent reduction of Methicillin Resistant *Staphylococcus aureus* – MRSA, following a 30 second exposure time at room temperature (20.0°C) in the presence of a 5% fetal bovine serum organic soil load.

SUMMARY OF RESULTS

Test Substance: Enagic Super 501 Strong Acidic Water 2.5 pH, Machine 1 (Serial #: 87100333) Lot # 1 and Machine (Serial #: 87100339) Lot # 2 with pre-filter C-1000

Test Organisms: Methicillin Resistant *Staphylococcus aureus* – MRSA (ATCC 33592)

Exposure Time: 30 seconds

Exposure Temperature: Room temperature (20.0°C)

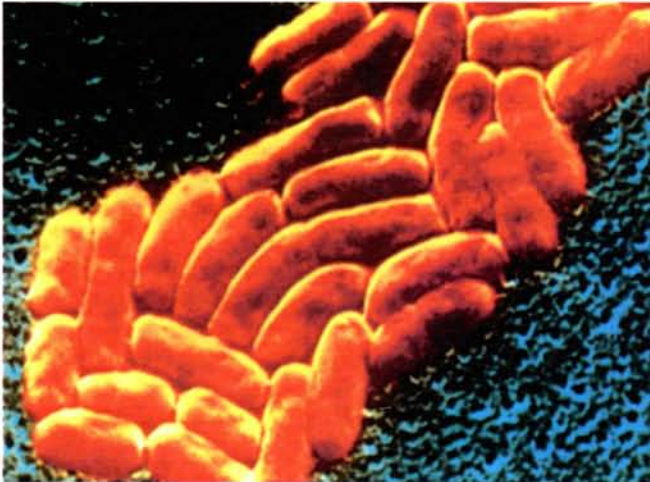
Organic Soil Load: 5% fetal bovine serum

EFFICACY RESULTS

Enagic Super 501 Strong Acidic Water 2.5 pH demonstrated efficacy of two lots against Methicillin Resistant *Staphylococcus aureus* – MRSA, and therefore, meets the requirements set forth by the U.S. EPA for sanitizer label claims following a 30 second exposure time at room temperature (20.0°C) in the presence of a 5% fetal bovine serum organic soil load.

STUDY TITLE: Germicidal and Detergent Sanitizing Action of Disinfectants
PROJECT NUMBER: A11304

PATHOGEN TESTED: "Super Bug" - Carbapenem Resistant *Klebsiella pneumoniae* – CRKP (ATCC BAA-1705)



Infection with carbapenem-resistant Enterobacteriaceae (CRE) or carbapenemase-producing Enterobacteriaceae is emerging as an important challenge in health-care settings. One of many carbapenem resistant Enterobacteriaceae (CRE) is Carbapenem Resistant *Klebsiella pneumoniae* - CRKP. Over the past 15 years, a progressive increase in CRKP has been seen worldwide; however, this new emerging nosocomial pathogen made major news as a "Super Bug" during an outbreak in Los Angeles, California in 2010 when over 350 cases were reported in less than 6 months. In the USA CRKP has been identified in 35 states and is recovered routinely in certain hospitals in New York and New Jersey. It is now the most common CRE species encountered within the United States.

ANALYSIS

Enagic Super 501 Strong Acidic Water 2.5 pH, Machine 1 (Serial #: 87100333) Lot # 1 and Machine 2 (Serial #: 87100339) Lot # 2 with pre-filter C-1000, demonstrated a >99.999 percent reduction of Carbapenem Resistant *Klebsiella pneumoniae* – CRKP following a 30 second exposure time at room temperature (20.0°C) in the presence of a 5% fetal bovine serum organic soil load.

SUMMARY OF RESULTS

Test Substance: Enagic Super 501 Strong Acidic Water 2.5 pH, Machine 1 (Serial #: 87100333) Lot # 1 and Machine (Serial #: 87100339) Lot # 2 with pre-filter C-1000

Test Organisms: Carbapenem Resistant *Klebsiella pneumoniae* – CRKP (ATCC BAA-1705)

Exposure Time: 30 seconds

Exposure Temperature: Room temperature (20.0°C)

Organic Soil Load: 5% fetal bovine serum

EFFICACY RESULTS

Enagic Super 501 Strong Acidic Water 2.5 pH demonstrated efficacy of two lots against Carbapenem Resistant *Klebsiella pneumoniae* – CRKP, and therefore, meets the requirements set forth by the U.S. EPA for sanitizer label claims following a 30 second exposure time at room temperature (20.0°C) in the presence of a 5% fetal bovine serum organic soil load.

STUDY TITLE: Germicidal and Detergent Sanitizing Action of Disinfectants

PROJECT NUMBER: A09385 / A11304

SUMMARY OF ANALYSIS

Enagic Super 501 Strong Acidic Water 2.5 pH, Machine 1 (Serial #: 87100333) Lot # 1 and Machine 2 (Serial #: 87100339) Lot # 2 with pre-filter C-1000, demonstrated a >99.999 percent reduction of *Staphylococcus aureus*, following a 30 second exposure time at room temperature (20.0°C) in the presence of a 5% fetal bovine serum organic soil load.

Enagic Super 501 Strong Acidic Water 2.5 pH, Machine 1 (Serial #: 87100333) Lot # 1 and Machine 2 (Serial #: 87100339) Lot # 2 with pre-filter C-1000, demonstrated a >99.999 percent reduction of *Escherichia coli*, following a 30 second exposure time at room temperature (20.0°C) in the presence of a 5% fetal bovine serum organic soil load.

Enagic Super 501 Strong Acidic Water 2.5 pH, Machine 1 (Serial #: 87100333) Lot # 1 and Machine 2 (Serial #: 87100339) Lot # 2 with pre-filter C-1000, demonstrated a >99.999 percent reduction of *Salmonella typhi*, following a 30 second exposure time at room temperature (20.0°C) in the presence of a 5% fetal bovine serum organic soil load.

Enagic Super 501 Strong Acidic Water 2.5 pH, Machine 1 (Serial #: 87100333) Lot # 1 and Machine 2 (Serial #: 87100339) Lot # 2 with pre-filter C-1000, demonstrated a >99.999 percent reduction of Methicillin Resistant *Staphylococcus aureus* – MRSA, following a 30 second exposure time at room temperature (20.0°C) in the presence of a 5% fetal bovine serum organic soil load.

Enagic Super 501 Strong Acidic Water 2.5 pH, Machine 1 (Serial #: 87100333) Lot # 1 and Machine 2 (Serial #: 87100339) Lot # 2 with pre-filter C-1000, demonstrated a >99.999 percent reduction of Carbapenem Resistant *Klebsiella pneumoniae* – CRKP following a 30 second exposure time at room temperature (20.0°C) in the presence of a 5% fetal bovine serum organic soil load.

SUMMARY OF RESULTS

Test Substance: Enagic Super 501 Strong Acidic Water 2.5 pH, Machine 1 (Serial #: 87100333) Lot # 1 and Machine (Serial #: 87100339) Lot # 2 with pre-filter C-1000

Test Organisms: *Staphylococcus aureus* (ATCC 6538)
Escherichia coli (ATCC 11229)
Salmonella typhi (ATCC 6539)
Methicillin Resistant *Staphylococcus aureus* – MRSA (ATCC 33592)
Carbapenem Resistant *Klebsiella pneumoniae* – CRKP (ATCC BAA-1705)

Exposure Time: 30 seconds

Exposure Temperature: Room temperature (20.0°C)

Organic Soil Load: 5% fetal bovine serum

Efficacy Result:

Enagic Super 501 Strong Acidic Water 2.5 pH demonstrated efficacy of two lots against *Staphylococcus aureus*, and therefore, meets the requirements set forth by the U.S. EPA for sanitizer label claims following a 30 second exposure time at room temperature (20.0°C) in the presence of a 5% fetal bovine serum organic soil load.

Enagic Super 501 Strong Acidic Water 2.5 pH demonstrated efficacy of two lots against *Escherichia coli*, and therefore, meets the requirements set forth by the U.S. EPA for sanitizer label claims following a 30 second exposure time at room temperature (20.0°C) in the presence of a 5% fetal bovine serum organic soil load.

Enagic Super 501 Strong Acidic Water 2.5 pH demonstrated efficacy of two lots against *Salmonella typhi*, and therefore, meets the requirements set forth by the U.S. EPA for sanitizer label claims following a 30 second exposure time at room temperature (20.0°C) in the presence of a 5% fetal bovine serum organic soil load.

Enagic Super 501 Strong Acidic Water 2.5 pH demonstrated efficacy of two lots against Methicillin Resistant *Staphylococcus aureus* – MRSA, and therefore, meets the requirements set forth by the U.S. EPA for sanitizer label claims following a 30 second exposure time at room temperature (20.0°C) in the presence of a 5% fetal bovine serum organic soil load.

Enagic Super 501 Strong Acidic Water 2.5 pH demonstrated efficacy of two lots against Carbapenem Resistant *Klebsiella pneumoniae* – CRKP, and therefore, meets the requirements set forth by the U.S. EPA for sanitizer label claims following a 30 second exposure time at room temperature (20.0°C) in the presence of a 5% fetal bovine serum organic soil load.