



INTEGRA by Anderson Testing Kit & Tool Box

INTEGRA by Anderson Laundry Program



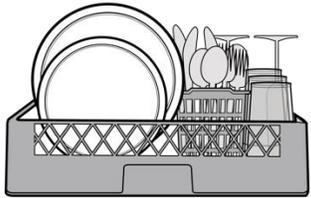
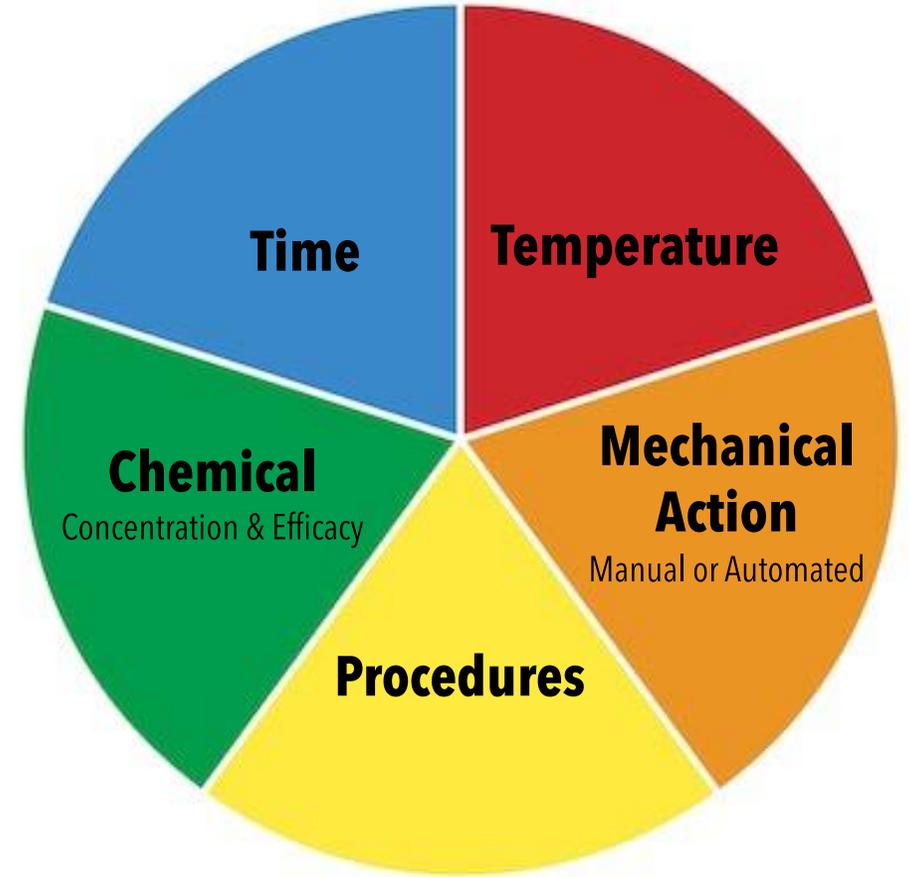
INTEGRA by Anderson Food Service Program



INTEGRA by Anderson / Daily Cleaners Program



Testing, Dilutions & Trouble Shooting Kit



Laundry Test Kit Instructions



Testing Water
Testing Fabric
Product Dilutions





Water Hardness Testing - Laundry

1. Rinse vial three times with sample to be tested - **Fill vial to 14.6 ml**
2. Add **5** drops of **Trace Hardness Buffer Solution** and swirl
3. Add **3** drops of **Hardness Indicator Liquid** and swirl to mix
NOTE: The sample will turn **Red** if hardness is present – continue test to next step. If the sample is **Blue** if there is no hardness -water is considered soft: stop test
4. Add **Hardness Titrant Grains** one drop at a time while swirling.
 - **Count** the number of drops until the sample color changes from **Red** to **Blue**
 - When the sample turns **Blue** if there is no longer hardness: water is considered soft: stop test
 - Compare the number of drops added top the sample to the Water Hardness Chart ->
 - 1 drop = 1 grain hardness
 - Example 8 drops = 8 grains of hardness in tested sample
5. Once solution has changed.... **Add one more drop to see if more change happens.** If no additional Change happens, record the last drop count where change in color was noted.



Water Hardness Range “Approximations”

- < 4 GPG Considered Soft Water
- 4.1 - 8 GPG Hard Water
- 8.1-16 GPG Very Hard Water
- > 16 GPG Extremely Hard Water

Notes: *As little as 4 GPG can cause a linen discoloration
Test both Hot & Cold Water – Hot May be on a water softener!





Water Iron Testing - Laundry

Add contents of one Iron powder pillow **Vario Ferro** to the supplied vial.

1. Fill the vial with water sample to **top line**.
2. Close the vial with the screw cap and shake for **20 seconds**.
3. Wait **3 minutes** to see if there is a color change.
4. Remove the cap
5. Place vial in white circles and **look down** into the vial to match to the color chart enclosed in the test kit to determine iron in parts per million

Notes: *As little as 0.2 ppm can cause a linen discoloration

Iron can show up as overall Yellowing, Oranges, Reds and potentially Gray.





Water pH Testing - Laundry

- Raw water has natural alkalinity and can and should be tested to get a supply water base line
- Wash step solution pH should be tested to determine product effectiveness and optimal parameters in formula steps to provide best wash outcomes

pH Test Strip

- Dip the strip into the motionless solution for 10 seconds
- Do not Shake or Rub Test Strip
- Remove test strip from solution and immediately and compare to the color chart.

Electronic pH tester





Final pH Testing for Fabric - Laundry

- 1.) Select a **white fabric*** to be tested after the extraction process so the fabric is still damp. Dry linen is acceptable but will have a slight variation to end point results usually to a higher pH.
- 2.) Place several drops of **Sour Tester** (SR2005) onto an untouched area of the fabric. Observe the color change of the indicator. This color change is directly related to the pH of the fabric
- 3.) Compare the color change to the color indicator chart to determine final pH of the linen sample



	Color	pH Condition
	Blue	High Alkaline
	Green	Slightly Alkaline
	Yellow-Green	Neutral
	Green-Yellow	Slightly Acidic - 6.5
	Yellow	6.0
	Orange to Orange-Red	5.5 to 4.5
	Red-Orange Red	Less than 4.5



Final linen pH goal to achieve 5.5 – 6.5

Note: *Sour Tester can stain fabric. Pick fabric that is near the end of its useful life. Test in area of linen where not noticeable. Please use carefully and rinse immediately after test with water and rewash

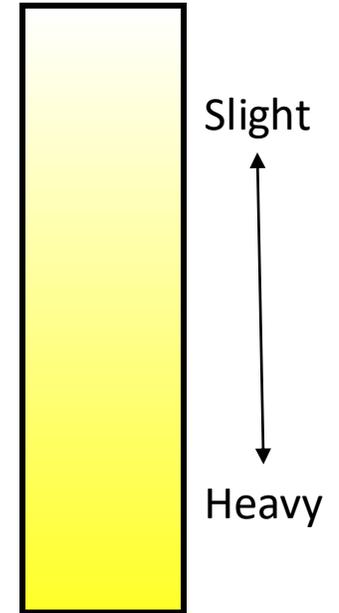




Residual Chlorine Testing for Fabric - Laundry

- 1.) Select a **white fabric** to be tested after the extraction process so the fabric is still damp. Dry linen is acceptable but will have a slight variation to end point results usually to a higher pH.
- 2.) Place **2-3 drops of Ortho Tolidine Reagent** onto one spot of the sample cloth.
- 3.) Residual Chlorine will develop a yellow color with the **Ortho Tolidine Reagent**. The darker the yellow color the greater the residual chlorine concentration present in the sample.

Note: Chlorine Test can stain fabric. Test in area of linen where not noticeable. Please use carefully and immediately rinse the sample cloth with tap water to remove reagent and rewash



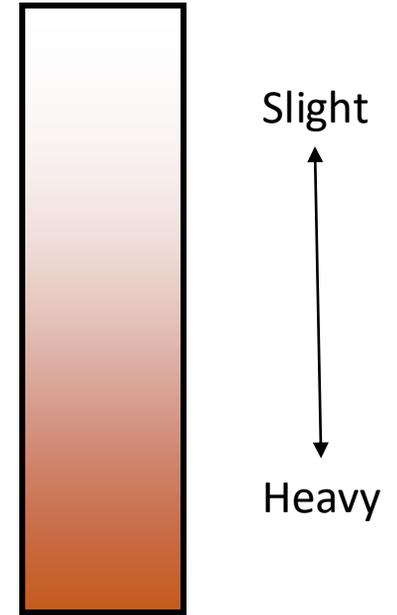
Excessive chlorine can turn a sample blue ●



Residual Iron Testing for Fabric - Laundry



- 1.) Select a **white fabric** to be tested after the extraction process so the fabric is still damp. Dry linen is acceptable but will have a slight variation to end point results usually to a higher pH.
 - 2.) Place **2 drops of Iron #1** reagent and **2 drops of Iron #2** reagent onto same spot of the sample cloth.
 - 3.) Residual Iron will develop a red color with the **Iron #1 & #2** reagent. The darker the red color the greater the iron residual present in the sample.
- Note: Iron Test** can stain fabric. Test in area of linen where not noticeable (on the tip/edge). Please use carefully and immediately rinse the sample cloth with tap water to remove reagent and rewash.



Bleach Testing Laundry

Optimal pH ranges and temp for chlorine bleaching effectiveness

140° - 150°F 10.2-10.8 pH

130° - 140°F 9.5-10.2 pH

120° - 130°F 9.0- 9.5 pH

110° - 120°F 8.5-9.0 pH

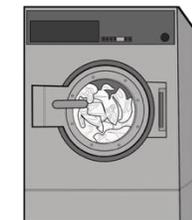
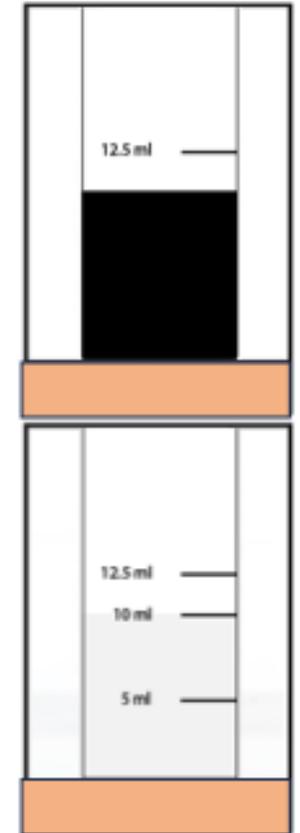


Optimal pH ranges and temp for oxygen bleaching effectiveness

160° -180°F pH Greater than 11.0

Testing Bleach ppm: When to test

- 1 minute into bleach step - **125-150 ppm goal**
- Middle of cycle - half way thru bleach step time
- 1 minute before drain - **10-25 ppm range goal**
- Final at about **10 ppm**



Laundry Product Dilutions

Product	Application	Optimum Temperature	RECOMMENDED OZ PER LOAD WEIGHT*						
			Homestyle 18#	20# - 40# 35#	45#-60# 50#	65#-80# 75#	90# - 110# 100#	135#	200#
PRELUDE	Laundry Break & Performance Booster	140°F -160°F		1.25 - 1.5	1.50 - 2.25	2.5 - 3.25	3.25 - 5.0	4.25 - 5.75	6.0 - 8.0
KLEEN BREAK	Laundry Break & Performance Booster	140°F -160°F		2.0 - 3.0	2.75-3.5	3.75-6.5	5.5 - 7.5	6.75-9.25	10.0 - 13.5
PLUS 15	Premium Laundry Detergent	130°F —150°F		0.75 - 1.5	1.0 - 2.0	1.75 - 3.25	2.5 - 4.75	3.0 - 5.75	4.25 - 8.5
ACCENT	High Surfactant Laundry Detergent	120°F -140°F		1.5 - 2.5	2.0 - 3.25	3.25 - 5.25	4.25 - 6.75	5.75 - 9.0	8.75 - 13.5
DAZZLE	Laundry Detergent with Odor Eliminator	120°F -150°F		1.25 - 2.5	1.5-3.25	2.5 - 5.25	3.25 - 7.0	4.25-9.0	6.25-13.5
LF ZYMES	Low Foaming Enzymatic Detergent	100°F -140°F		0.75 - 1.5	1.0-2.0	1.5 - 3.25	2.25 - 4.25	3.0-5.75	4.0-8.0
TURNOUT	First Responder Laundry Detergent	100°F -105°F		1.25 - 2.5	1.5-3.25	2.25 - 5.25	3.0 - 6.75	4.25-9.0	6.25-13.5
KLEEN DETERGENT	Soil Removing Detergent	130°F —150°F		2.0 - 3.0	3.0-4.0	4.25 - 5.25	5.0 - 7.5	6.0-8.75	7.5-13.0
HARMONY	Detergent with Color Safe Bleach	100°F -120°F	2.0-3.0	2.0 - 3.5					
TOP LOADER	Homestyle Laundry Detergent	100°F -120°F	1.0-2.0	1.0 - 2.5					
FD FREE	Fragrance & Dye-Free Laundry Detergent	120°F -150°F	2.0-3.0	1.25 - 2.5	1.5-3.5	2.25-6.25	3.0 - 7.5	4.25-9.5	6.25-14.25
SYNERGY PLUS	Premium Built Laundry Detergent	130°F -150°F		1.5 - 3.0	2.0-4.25	3.25 - 6.25	4.25 - 8.75	5.75-11.5	8.5-17.0
KLEEN BUILT DETERGENT	Built Laundry Detergent	130°F -150°F		2.25 - 4.0	3.0-5.5	4.0 - 8.5	5.25 - 10.25	7.25-13.70	10.75-21.0

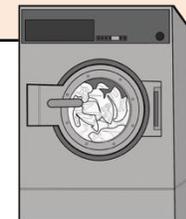
The reason for product ranges: **Temperature, Water Quality, Soil Load, Procedures, and More...**



Laundry Product Dilutions

Product	Application	Optimum Temperature	RECOMMENDED OZ PER LOAD WEIGHT*						
			Homestyle 18#	20# - 40# 35#	45#-60# 50#	65#-80# 75#	90# - 110# 100#	135#	200#
INSURE	Premium Liquid Chlorine Bleach	135 °F -150 °F	1.0 - 2.0	1.5 - 2.5	2.25-3.5	3.25-5.5	4.5-6.75	5.75-9.25	8.5-13.5
KLEEN BLEACH	Liquid Chlorine Bleach	135 °F -150 °F	1.5 - 2.5	2.25 - 3.0	3.25-4.25	4.75-7.5	6.25-8.25	8.5-11.25	12.5-16.5
PROPEL	Premium Color Safe Bleach	160 °F -180 °F	1.25 - 2.0	1.25 - 2.25	1.5-3.25	2.5-4.75	3.5-6.75	4.5-8.75	6.75-13.25
SUPER PROPEL	34% Active Color Safe Bleach	160 °F -180 °F	NA	0.5 - 0.75	0.75-1.25	1.25-2.25	1.75-3.25	3.0-4.0	4.5-6.75
OXY BOOST	Color Safe Bleach & Laundry Performance Booster	160 °F -180 °F	1.5-2.5	1.75-2.75	2.25-5.5	4.0-7.5	5.0-10.0	6.75-13.5	8.0- 16.0
NEUTRA	Premium Iron Controlling Sour & pH Adjuster	105 °F -115 °F		0.5-1.0	1.0-1.5	1.25-2.25	1.75-2.75	2.25-3.75	3.25-5.5
KLEEN SOUR	Iron Controlling Sour	105 °F -115 °F		1.25-1.75	1.75-2.5	2.5-4.25	3.5-4.75	4.5-6.75	6.5-10.0
FINALE PLUS	Premium Soft/Sour pH Neutralizing Fabric Softener	105 °F -115 °F		0.75-1.5	1.25-2.25	1.5-3.25	2.5-4.5	3.0-5.75	4.5-8.75
KLEEN SOFT/SOUR	Soft/Sour pH Neutralizing Fabric Softener	105 °F -115 °F		1.0-2.0	1.5-2.5	2.25-4.25	3.0-4.5	3.75-6.25	5.75-9.25
				35#	50#	75#	100#	135#	200#
LAUNDRY GUARD	Laundry Sanitizer/ Residual Bacteriostatic	90 °F -110 °F		1.05	1.50	2.25	3.00	4.05	6.00
				3 oz per 100# of dry linen					
FLUFF	Premium Fabric Softener & Conditioner	105 °F -115 °F		0.25-0.75	0.5-1.0	0.75-1.25	1.25-1.75	1.5-2.25	2.25-3.25
FRESH LINEN	High-Fragrance Fabric Softener & Conditioner	105 °F -115 °F		0.5-1.25	1.0-1.5	1.5-2.25	2.0-3.0	2.75-4.0	3.75-6.0
KLEEN SOFT	Fabric Softener & Conditioner	105 °F -115 °F		1.0-1.5	1.5-2.0	2.0-3.25	2.5-3.5	3.25-4.75	5.25-7.0
LIQUID FABRIC SOFTNER	Fabric Softener & Conditioner	105 °F -115 °F		1.0-1.5	1.5-2.0	2.0-3.25	2.5-3.5	3.25-4.75	5.25-7.0
SPORT FRESH	Odor Counteractant Laundry Additive	90 °F -110 °F		2.5 -3.0	3.25-4.25	4.75-7.5		8.5-11.25	12.5-16.5

The reason for product ranges: **Temperature, Water Quality, Soil Load, Procedures, and More...**





Laundry Product Stain Removal Systems - Liquids

SR1 – 2/1G Inverted – 4/1G Handled:

SR1 is a solvent based stain and spot remover designed designed to safely remove the toughest of stains. Effectively removes a verity of food, medical and greasy soils. SR1 is able to remove difficult stains without harming cotton, natural or synthetic fibers.

- Effective on Medicine, Medicinal & Supplement Stains, Blood, Paint & Ink, Coffee, Tea, Food Coloring, Shoe Polish, Make Up & Lipstick and many other difficult to remove stains.

SR2 – 2/1G Inverted – 4/1G Handled:

SR2 is Emulsifying Greasy Stain Spotter designed to remove a verity of food and greasy soils. SR2 is able to break down and remove difficult stains without harming cotton, natural or synthetic fibers.

- Effective on Greasy Soils & Tar, Crayon, Marker & Ink, Suntan Lotion, Greasy Food Service Soils, Motor & Mineral Oils, Cooking Oils & Grease and Shirt Collars & Cuffs and many other difficult to remove greasy stains.

SR3 – 2/1G Inverted – 4/1 gal Handled:

SR3 is Enzymatic Broad Range Spotter designed to remove a verity of stains from linens. SR3's enzymes work to break down and remove difficult organic based stains without harming cotton, natural or synthetic fibers.

- Effective on Food Soils & Stains, Bed Pad Organic Soils, Blood & Blood Stains, Shirt Collars & Cuffs, Mustard & Ketchup, Grass Stains, Make Up & Cosmetics, Red Wine, and other difficult to remove organic stains & soils.

SR1, SR2 & SR3 are Ready-to-Use Formulas. Apply directly to fabric via spray bottle, squeeze bottle or pump-up sprayer. Agitate to insure contact with stains. Allow 15 minutes of contact time. Launder in warmest temp recommended for fabric. Can also be used as a spot remover for carpets upholstery and other textiles by using

alternative procedure found on Product Information Bulletin





Laundry Product Stain Removal Systems - Powders



SR RECLAIM - 1.9#, 2/10# & 45#: SR RECLAIM is a laundry rescue product designed to remove the toughest of stains, restore whiteness and brightness to fabrics that have been discolored by soils and stains that are not removed during the regular laundry process. SR RECLAIM helps extend linen life and reduce replacement costs. Can be used as a pre-soak or as part of a stain removing reclaim wash cycle. For use on white and color safe fabric.

- RTU Formula. Use 10-16 oz of SR RECLAIM per 50# for Normal stains, Use up to 32 oz per 50 lb for heavy stains.
- For use on white or color safe linen only. Add SR RECLAIM to combined reclaim load and run cycle. Wash items in normal wash cycle after reclaim cycle. Soak or agitate in a machine for 30 min minimum. Finish with a standard wash cycle. Can also be used as a laundry additive in an extended wash cycle in a reclaim laundry program.



SR ENZYME - 1.9# & 2/10# & NP ENZYME NP - 2/10#: SR ENZYME (or NP ENZYME) is an enzymatic laundry treatment designed to safely remove stains and soils in white or colored linens and can be used as a pre-soak or as part of a stain removing wash cycle. SR ENZYME (or NP ENZYME) is a low foaming formulation that is designed to effectively remove organic soils, proteins and greasy soils without damaging fibers. SR ENZYME (or NP ENZYME) helps extend linen life and reduce replacement costs. Can be used as a pre-soak or as part of a stain removing reclaim wash cycle.

- RTU Formula. Use 8-16 oz of SR ENZYME (or NP ENZYME) per 5 Gallon Bucket, Use 32 oz per 50 lb for heavy stains.
- Add SR ENZYME (or NP ENZYME) to warm water. Agitate during soak/cycle. Allow to soak for a minimum of 1-2 hours. White fabrics may soak overnight. Wash items in normal wash cycle after reclaim soak/cycle. Can also be used as a laundry additive in an extended wash cycle in a reclaim laundry program.



SR IRON -1.9# is a concentrated iron removing powdered laundry treatment and pre-soak. SR IRON is designed to be highly effective on removing rust, scale and iron stains while restoring brightness to both white and colored fabrics. SR IRON should be used in a stand alone iron removing soak.

- RTU Formula. Use 8-16 oz of SR IRON per 5 Gallon Bucket, Use 32 oz per 50 lb of linens.
- Add SR IRON to warm water. Agitate during soak/cycle. Allow to soak for a minimum of 30 minutes.
 - Wash items in normal wash cycle after reclaim soak/cycle. Can also be used as a laundry additive in an extended wash cycle in a reclaim laundry program.





Laundry Program Trouble Shooting

Check Equipment Function

- ✓ Injection equipment – is the dispenser calibrated and functioning correctly
- ✓ Laundry machine functioning properly triggering signals at the right times
- ✓ Do you have hot water- have water temps changed
- ✓ Has water testing shown a change in water quality – do the tests
- ✓ Do you have products on line – are the bottles empty

Check Product Feed Amounts

- ✓ Physical injection rate by measure – prove dispensed amounts are correct do not guess. Do squeeze tubes need to be changed?
- ✓ Proper titration of products – check dump water for correct parameters for fabric type
- ✓ Increase or decrease detergent/rinse in relation to

If all else fails, reason out the problem and research the answers.

increase/decrease in soil load or water condition changes

Check Users Procedures

- ✓ Improper preparation of the soiled items – bad spotting and sorting
- ✓ Selection of incorrect machine and dispenser programs for fabric type
- ✓ Point out any improper usage or mishandling by involved employees or new employees due to a lack of proper procedure training

Read the Label/Product Bulletin/Technical Data Manual

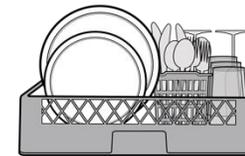
- ✓ Make sure you are recommending the correct product for the soil conditions, water hardness, cleaning operation and fabric type
- ✓ Recommended usage rates per the product you are using – consult test card



Food Service Test Kit Instructions



Testing Water
Testing Titrations
Product Dilutions





Water Hardness Testing - Food Service

1. Rinse vial three times with sample to be tested - **Fill vial to 14.6 ml li**
2. Add **5** drops of **Trace Hardness Buffer Solution** and swirl
3. Add **3** drops of **Hardness Indicator Liquid** and swirl to mix
NOTE: The sample will turn **Red** if hardness is present – continue test to next step.
If the sample is **Blue** if there is no hardness – water is considered soft: stop test
4. Add **Hardness Titrant Grains** one drop at a time while swirling.
 - **Count** the number of drops until the sample color changes from **Red** to **Blue**
 - When the sample turns **Blue** if there is no longer hardness: water is considered soft: stop test
 - Compare the number of drops added top the sample to the Water Hardness Chart ->
 - 1 drop = 1 grain hardness
 - Example 8 drops = 8 grains of hardness in tested sample
5. Once solution has changed.... **Add one more drop to see if more change happens.**
If no additional change happens, record the last drop count where change in color

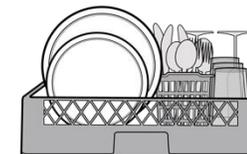


Water Hardness Range “Approximations”

- < 4 GPG Considered Soft Water
- 4.1 - 8 GPG Hard Water
- 8.1-16 GPG Very Hard Water
- > 16 GPG Extremely Hard Water

Notes: *As little as 4 GPG can cause issues

Test both Hot & Cold Water – Hot May be on a water softener!





Dish Machine Detergent Titrations - Food Service

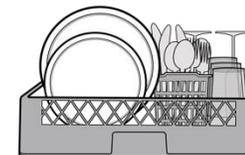
TITRATION DIRECTIONS – Detergent concentration in wash tank

1. Add **5 drops** of **0.5 N Sodium Thiosulfate** to a **25 ml** sample and swirl to mix. (This step neutralizes the chlorine component in the sample)
2. Add **2 drops** of **Phenolphthalein indicator** and swirl to mix
3. Add Titration Solution **0.50 Hydrochloric Acid** one drop at a time while holding bottle vertically.
4. Mix after each drop and **count the number of drops it takes to turn the sample from red to clear**. Record the number of drops and cross-reference the titration chart test kit product card to document % of concentration of detergent



Note: To Convert “Drops” to PPM: multiply Drops times 31

To Convert PPM to “Drops”: Divide ppm by 31



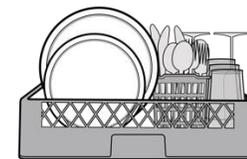
Water Iron Testing - Food Service



Add contents of one Iron powder pillow **Vario Ferro** to the supplied vial.

- 1.) Fill the vial with water sample to **top line**.
- 2.) Close the vial with the screw cap and shake for **20 seconds**.
- 3.) Wait **3 minutes** to see if there is a color change.
- 4.) Remove the cap
- 5.) Place vial in white circles and look down into the vial to match to the color chart enclosed in the test kit to determine iron in parts per million

Note: *As little as 0.2 ppm can cause issues





Rinse Aid Testing - Food Service

Rinse Aid Results

Correct Rinse Concentration:

Rinse water sheets completely; does not bead up or cling to glassware and dishware. Glassware, etc., should dry spot free.

Low Rinse Concentration:

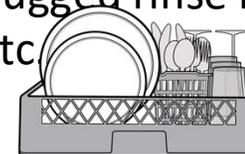
Rinse water does not sheet. It beads up and clings to dishware, glassware and silverware. Leaves water spots on the glassware and dishware.

High Rinse Concentration:

Rinse water sheets well but leaves a greasy film (milky white) and bitter taste on glassware and dishware.

Rinse Test

1. Put a couple of drops of Phenolphthalein on a piece of dishware. If the dishware turns **red (or pink)** where the Phenolphthalein was dropped, this indicates that there is a **detergent residue** left on the dishware and it is **not** receiving an adequate rinse. Another indication of poor rinsing is loose food particles left on dishware and glassware.
2. **Probable causes** for the poor rinsing are low rinse pressure, poor racking procedures, plugged rinse nozzles, a rinse arm that does not rotate, rinse solenoid valve that does not function properly, etc.



Testing Sanitizer/Lo Temp Dish Machine - Food Service



- When you sanitize, you are killing / reducing the number of potential pathogens present by 99.9% Sanitizing reduces the pathogens identified on the product's label on surfaces.
- Collect a sanitizing solution sample from machine sump - drain area or use an upright cup to catch a sample from a completed machine cycle. Dip the strip into sample then immediately remove and compare to the color chart. Sample can also be taken by touching strip to still-damp ware that was just removed from the machine.

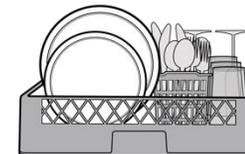
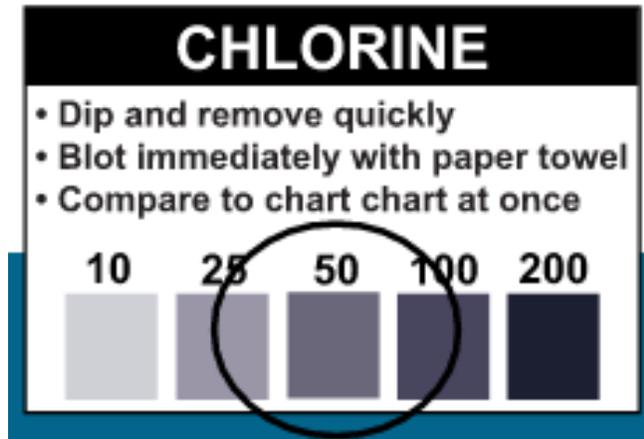
HALT/IMPACT : 50 – 100 ppm Sanitizer solution

Lo temp dish machines should be tested using the Chlorine test papers provided in test kit.

50 ppm is minimum reading necessary



ATK4501



Testing Sanitizer - Food Service



Sanitizing reduces the number of microorganisms to a safe level

- Always Sanitize **after** cleaning in a 3 compartment sink or on hard surface



3rd compartment sink and Sanitizer buckets sanitizing solution should be tested using the QT-10 test papers

Dip the strip into the sanitizing solution (DO NOT SHAKE) for 10 seconds, then remove and compare to the color chart.

BARRIER II – 200- 400 ppm Quat solution

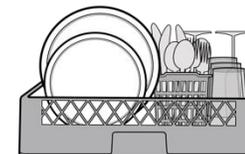
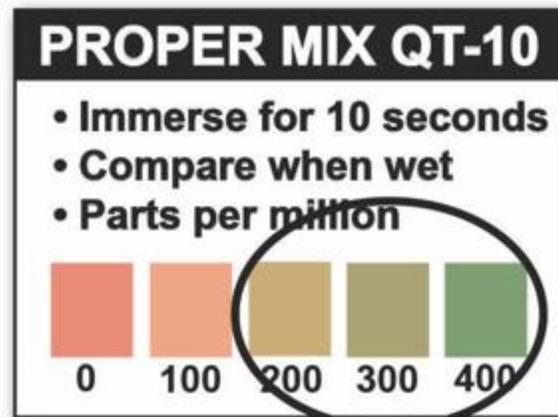
200 ppm is minimum reading necessary



ATK4502

Note:

- BARRIER II is 1 oz to 4 Gallons to deliver 200 ppm.
- If using Hand Pump or Wall Pump you will need to determine volume of a sink:
 - Water Volume of a Sink: (Length (inches) * width (inches) * typical depth of water (inches)**) / 231 = total gallons
- Use a water level sticker for repeated accuracy

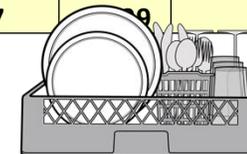


Food Service Product Dilutions

Product	Application	Recommended Dosage	"Drop" Target				
			Light Soils	Moderate Soils	Heavy Soils		
CONQUER	Premium All-Temp Detergent	3-6 ml per Gallon	3-4	4-5	6-7		
SABER	Premium Non Chlorinated All Temp Detergent	3-6 ml per Gallon	3-4	4-5	6-7		
TRIUMPH (HD Dishmachine Detergent)	All Temp Detergent	4-8 ml per gallon	4-5	6-7	7-8		
EDGE	Non Chlorinated All Temp Detergent	4-8 ml per gallon	4-5	6-7	7-8		
RENEW DETERGENT (HPG AUTO DISH)	Premium HPG All Temp Detergent	4-8 ml per gallon					
PROTECT	Metal Safe All-Temp Detergent	6-10 ml per gallon	2-3	3-4	5-6		
ECLIPSE	Heavy Duty All Temp Detergent	4-8 ml per gallon					
ECLIPSE EXTRA (Eclipse ES)	Premium All Temp Detergent	4-8 ml per gallon					
DISH KLEEN RED	Heavy Duty Warewash Detergent	6-12 ml per gallon	4-5	6-7	8-9		
RAVE (Lo-Temp Dishmachine Det.)	Low Temp Warewash Detergent	5-10 ml per gallon					
DISH KLEEN HD	Warewash Detergent	6-12 ml per gallon					
MACHINE DETERGENT 200	Incapsulated Detergent	.25 oz per gallon					
SOFT CELL	Homestyle Machine Detergent	1/8 - 1/4 oz per gallon					
SPOTLESS	Premium All Temp Rinse Aid	1.5-3.0 ml per gallon	Assumes 1 Gallon of Rinse				
FLASH (All Temp Rinse Aid)	All Temp Rinse Aid	2.75-5.5 ml per gallon					
GLISTEN	Acidic All Temp Rinse Aid	2.5-5.0 ml per gallon					
RENEW RINSE (HPG Rinse)	Premium HPG All Temp Rinse Aid	1.75-3.5 ml per gallon					
KLEEN RINSE (All Temp Rinse Kleen)	All Temp Rinse Aid	4.5-8.5 ml per gallon					
Sanitizer Dosing is based on 1 Gallon of Sanitizer Solution		% Active				% Available CL	50 ppm mL
HALT	Ultra Concentrated Lo-Temp Sanitizer	12%	11.5%	1.66	1:2285	3.31	1:1142
IMPACT (Lo-Temp Chlorinating Sanitizer)	Lo-Temp Sanitizer	11%	10.5%	1.81	1:2094	3.61	1:1047
		10%	9.3%	1.99	1:1904	3.97	1:951
		9%	8.6%	2.21	1:1713	4.42	1:856
		8%	7.7%	2.48	1:1523	4.97	1:761
		7%	6.7%	2.84	1:1332	5.68	1:666
		6%	5.8%	3.31	1:1142	6.62	1:570
		5.25%	5%	3.79	1:999	7.57	1:500

Note 1: To Convert "Drops" to PPM: multiply Drops times 31 to Convert PPM to "Drops": Divide ppm by 31

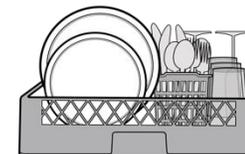
Note 2: Water Volume of Wash Tank: (Length (inches) * width (inches) * typical depth of water (inches)**) / 231 = total gallons



Food Service Product Dilutions

Product	Application	Recommended Dosage	Target		
LUSTER	Premium Pot & Pan Detergent	1oz - 2oz for up to 10 gallons			
CITRI SUDS	Premium Pot & Pan Detergent	1oz - 2oz for up to 10 gallons			
RENEW POT & PAN (HPG POT & PAN)	Premium HPG Pot & Pan Detergent	1oz - 2oz for up to 10 gallons			
TOP SHELF	Low Foam Bar Sink Detergent	0.5 to 1 oz per gallon of water			
PRISM	Pot & Pan Detergent	1.5oz up to 6 gallons			
GREEN APPLE	Pot & Pan Detergent	1oz - 3oz for up to 10 gallons			
FLAMINGO (PINK POT & PAN)	Pot & Pan Detergent	0.5oz to 1oz per gallon			
BLUE ENDURANCE (Blue Crème)	Premium Pot & Pan Detergent	1oz - 3oz for up to 10 gallons			
GREEN ENDURANCE (Green Shot P&P)	Pot & Pan Detergent	1oz - 3oz for up to 10 gallons			
LEMON ENDURANCE (Lemon Shot P&P)	Lemon Pot & Pan Detergent	1oz - 3oz for up to 10 gallons			
BARRIER II	No Rinse Broad Range Sanitizer	1oz per 4 gallons	200-400 ppm		
INVADE	Premium Presoak	1oz per gallon			
BREACH (Silverware Presoak)	Silverware & Utensil Presoak	1 oz per Gallon			
BLAST (Silverware Presoak Blue)	Presoak & Detarnisher	1oz per 5 gal of water			
VANISH (Powdered Destaining Agent)	Pre-Soak & Destaining Powder	1oz per gallon			
DISSOLVE	Liquid Delimer	3-4oz per gallon			
REVIVE (Liquid Delimer)	Extreme Duty Descaler	3-4oz per gallon			
COBRA	Beverage Station & Bar Drain Cleaner	1.5-2 oz per drain per night			
CRISP	Fruit & Vegetable Wash	0.5oz per quart/6-10 oz in 5 gal sink			
SIZZLE	Neutral pH Grill & Oven Cleaner	RTU - Use full Strength			
LEGIT	High Temp Flat Top Cleaner	RTU - Use full Strength			
NU FRYER (Powdered Deep Fry Cleaner)	Fryer Boil Out & Cleaner	2-3oz per gallon			
NU COMBI CLEAN (Combi Oven Cleaner)	Combi Oven Cleaner	oven pump set			
NU COMBI RINSE (Combi Oven Rinse)	Combi Oven Rinse	oven pump set			
NU OVEN (HD Oven & Grill)	Oven & Grill Cleaner	RTU - Use full Strength			
HEATWAVE	No Defrost Freezer Cleaner	RTU - Use full Strength			

Note: Water Volume of Wash Tank: (Length (inches) * width (inches) * typical depth of water (inches)**) / 231 = total gallons





Various Draw Tests - Food Service

High Temp Dish Machine Detergent

- Run machine and titrate according to test kit card for a baseline
- Drain machine
- With a graduated cylinder marked in Milliliters fill with detergent to a determined level
- Insert detergent draw (pick up) tube into cylinder and fill machine starting a cycle
- Once detergent pump is satisfied check graduated cylinder for usage amount

High Temp Dish Machine Rinse Aid

- Disassemble Rinse Aid line from discharge side of chemical pump
- Start machine to run a cycle
- Hold a graduated cylinder marked in Milliliters to the discharge side of the rinse aid pump catching chemical until completion of cycle.

Low Temp Dish Machine 3 Products

- Run machine and titrate detergent according to test kit cards along with checking ppm of sanitizer according to test kit cards
- One at a time, unhook discharge side of a chemical from each respective built in pump and again run machine. Using a suitable container, catch chemical during duration of pump run time. If necessary, transfer chemical to a cylinder marked in milliliters to determine usage amount.

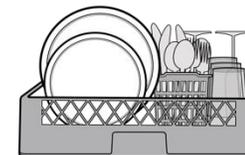
Timed Pumps (drain maintenance, small laundry)

- With a graduated cylinder or bottle marked in ounces, fill to a determined level with chemical to measure
- *Insert the draw (pick up) tube into the cylinder or bottle
- Start pump and run for the set amount of time
- Check cylinder or bottle for the usage amount drawn out.
- To double check test, run a second time catching the amount pumped out of the discharge side of the pump and compare to first recorded amount.

Water Fed Proportioner

- Adjust water valves to determine desired flow rate and temperature
- With a graduated cylinder or bottle marked in ounces, fill to a determined level with chemical to measure allowing to enough to gauge for a gallon fill on discharge side
- *Insert the draw (pick up) tube into the cylinder or bottle
- At the discharge hose insert bucket with gallon measurements
- Adjust water valves to the desired flow rate and turn on proportioner filling bucket to the 1 gallon mark.
- Check cylinder or bottle to determine chemical usage amount
- If quart bottle amounts are desired divide the chemical usage by 4 to determine concentrate per quart bottle.

* Prior to testing make sure the suction side of the pump or proportioner has held the prime of the chemical with no air pockets in the line.





Various Tests - Food Service

Soda Test – Purpose of test is to demonstrate food soil remaining in glassware.

Items needed:

1. Two glasses which can be wine or water glasses but preferably with no ridges or designs (something easy to see through)
2. Clear soda such as 7-Up, Sprite or soda water
3. A plastic straw

Prepare to conduct the test: Hand process/clean **only one** of the samples at the hand sink with hand soap and a paper towel to wash away soils that remain both on the inside and outside of the glassware. Rinse with fresh water.

How to conduct the test:

1. Pour clear soda into the dirty glass and the carbonation will coat the inside of the glass. Carbonation will stick to food soil. Everywhere there are bubbles, there is food soil.
2. Pour the soda from the dirty glass into the clean glass. The clear soda should look like tap water with no carbonation/bubbles present.
3. Repeat step 1 & 2 again, further demonstrating the evidence of food soil.
4. While the soda is in the clean glass, use the plastic straw to demonstrate that there still is carbonation in the soda because the bubbles **will** stick to the plastic straw. (demo cannot be done with plastic cups or glasses for this reason)

Salt Test - Purpose of test is to demonstrate food soil remaining in glassware.

Items needed:

1. Two glasses which can be wine or water glasses but preferably with no ridges or designs (something easy to see through)
2. Table salt, not Kosher salt

Prepare to conduct the test: Hand process/clean **only one** of the samples at the hand sink with hand soap and a paper towel to wash away soils that remain both on the inside and outside of the glassware. Rinse with fresh water.

How to conduct the test:

1. Dunk the dirty glass in water to wet the entire inside surface of the glass. While still damp, turn the dirty glass at a 45-degree angle and sprinkle the salt into the dirty glass while trying to coat the entire inside of the glass with the salt. The salt **will not** coat the inside of the glass because salt **will not** stick to food soil. Everywhere there is no salt stuck to the glass, there is food soil.
2. While the clean glass is still damp, repeat the process and the salt **will coat** the entire surface of the glass completely.





Various Tests - Food Service

Mayo Test – Purpose of the test is to demonstrate poor wash pressure and poor/low wash temps.

Items needed:

1. A tall (tallest available) dirty glass
2. Mayonnaise

How to conduct the test:

1. With a spoon or spatula, put mayonnaise inside at the bottom of the glass
2. Put the glass in a rack and run through the dish machine
3. After removing the glass from the machine, there will still be mayonnaise at the bottom of the glass indicating either low wash temps or low wash pressure.
4. At a wash temp of 140-degrees or higher, mayonnaise will “melt” away
5. If the wash temp is 140-degrees or higher and mayonnaise remains, this indicates poor wash pressure

Iodine Test: Purpose of the test is to demonstrate the residual of starch/food soil on plates, cups and bowls.

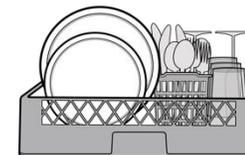
Test should be done after soda or salt test where food soil residual has been confirmed.

Items needed:

1. Iodine - should not be mercurochrome
2. A cup, bowl or plate (for best results use white samples) the darker the sample color, the more difficult to see the food soil

How to conduct the test:

1. Use the dropper from the iodine bottle to drip 5-6 drops of iodine on the inside surface of the ware being tested
2. Turn on the faucet at the hand sink so that the water just trickles out. Slowly add enough water to mix with the iodine being careful **not to rinse away the iodine or dilute too much where it will not react properly.**
3. The iodine “slurry” will positively identify food soil as a purple-ish color in areas that food soil remains



Troubleshooting the cause of film on glasses, wares or plastic

Test #1

Test a glass or ware by dropping a few drips of distilled water on it and then placing 2-3 drops of phenolphthalein in the water. If a pink to red color appears the glass or ware has not been completely rinsed and the film is most likely **detergent**.

Test #2

Rinse a section of a glass or ware with distilled water and allow to air dry. For more accurate results soak glass or ware in distilled water for 5 to 10 minutes and allow to dry. If all the film is removed it was caused by the effects of **total dissolved solids** in the water source.

Test #3

Apply a few drops of liquid delimer to the glass or ware and follow with a distilled water rinse. Allow piece to air dry. If this shows improvement, soak ware in delimer solution (full strength delimer to 25% Delimer/75% hot water) for 5 to 10 minutes. Remove, rinse with water, then distilled water and let air dry. If the film was removed it was caused by **water hardness**.

Test #4

Soak the glass or ware in a solution of a 2-4 oz. chlorine sanitizer per gallon of hot water (120-140 degrees) for 5 to 10 minutes. Remove and rinse thoroughly with water and follow with a distilled water rinse and allow to air dry. If the film was removed it was caused by **food soil staining**.

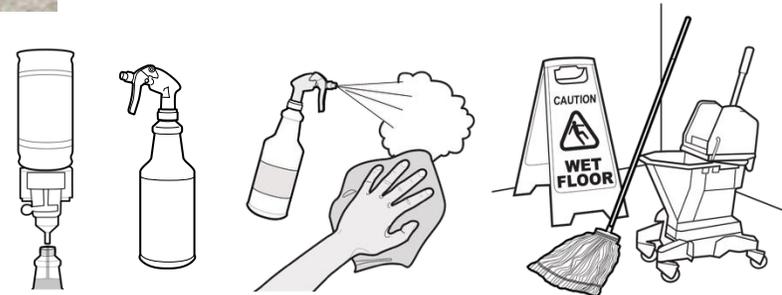
* If the glass or ware failed all of the tests, etching (**mineral or physical**) or plastic fatigue may be the problem. Everything has a life cycle and eventually wears out and need to be replaced.

Housekeeping & Daily Cleaners Test Kit

Instructions



Dilution Rates



Housekeeping & Daily Cleaners Product Dosing

Product	Application	Recommended Dosage	DOSE Activator Options
BRILLIANT	Glass & Multi Surface Cleaner	1.5oz per Quart / 6oz per Gallon	Green Activator or Continuous Flow
NATURAL (Natural Dose)	Neutral All Purpose Cleaner	1.5oz per Quart / 6oz per Gallon	Green Activator or Continuous Flow
NATURAL PEROXY (Natural)	Multi Surface Cleaner with Peroxide	Light Duty - 2oz per Gallon / 0.5oz per Quart General Purpose - 4oz per Gallon / 1oz per Quart Heavy Duty - 12oz per Gallon / 3oz per Quart Super Duty - 24oz per Gallon / 6oz per Quart	
KLEEN GP	General Purpose Cleaner	2-3 oz per Gallon	
PRISTINE	Acidic Restroom Cleaner	1.5oz per Quart / 6oz per Gallon	Green Activator or Continuous Flow
CHLORACTION (Cutter Board PLUS)	Chlorinated Cleaner & Destainer	Moderate soil use 5oz per quart of water. Heavy soil use 10oz per quart of water in a spray bottle Cutting Board restoration, use full strength	
STELLAR	Neutral Floor & Multi Surface Cleaner	1.5oz per Gallon	
BIO CLEAN	No Rinse Enzyme Floor Cleaner	1-6oz per Gallon	
GP XTRA	Emulsifying Degreaser & Floor Cleaner	Light Duty - 2oz per Gallon / 0.5oz per Quart General Purpose - 3oz per Gallon / .75oz per Quart Heavy Duty - 6oz per Gallon / 1.5oz per Quart Super Duty - 12oz per Gallon / 3oz per Quart	
DEFY	Heavy Duty Cleaner & Degreaser	1.5oz per Quart / 6oz per Gallon	Green Activator or Continuous Flow



Housekeeping & Daily Cleaners Product Dosing

Product	Application	Recommended Dosage	DOSE Activator Options
DEFEND	Quaternary Cleaner & Disinfectant	0.5oz per Quart / 2oz per Gallon	0.5oz per Quart / GOLD Activator or Continuous Flow
SANI QUIK	Cleaner & No Rinse Sanitizer	0.5oz per Quart	GOLD Activator or Continuous Flow
Q FORCE 256	Disinfecting Floor & Multi Surface Cleaner	0.5oz per Gallon / 2oz per Gallon	
Q FORCE 256 (Parvo Kill)	Effective against Canine Parvovirus-CPV, Rabies	2.25oz per Gallon	
FRESH AIR	Odor Neutralizer & Fabric Refresher	1.5oz per Quart / 6oz per Gallon	GREEN Activator or Continuous Flow
REFRESH	Air Freshener	1.5oz per Quart / 6oz per Gallon	GREEN Activator or Continuous Flow
RIVER RAPIDS	Air Freshener	1.5oz per Quart / 6oz per Gallon	GREEN Activator or Continuous Flow
SEA BREEZE	Air Freshener	1.5oz per Quart / 6oz per Gallon	GREEN Activator or Continuous Flow
MORNING MIST	Air Freshener	1.5oz per Quart / 6oz per Gallon	GREEN Activator or Continuous Flow
PURSUIT	Enzyme Drain Maintainer	4oz per Drain Weekly	
SAFEWASH	Foaming Vehicle Wash	1.5 oz for up to 5 Gallons	GREEN Activator or Continuous Flow
CITRI FOAM	Foaming Hand Soap	RTU - Use Full Strength	
RENEW HAND (HPG Foaming Hand Soap)	HPG Foaming Hand Soap	RTU - Use Full Strength	



INTEGRA by Anderson Test Kit – Reorder



#s

ANDHA7407B -	Trace Hardness Buffer
ANDHA7430B -	Hardness Indicator Liquid
ANDED2007B -	Hardness Titrant Grains
ANDOT1510B -	Ortho-Tolidine (OTO), 60 mL
ANDHA6115B -	Hydrochloric Acid, 0.500 N
ANDST2950B -	Sodium Thiosulfate 0.5N 2oz
ANDSR2005B -	Sour Tester, 60 mL
ANDFE3108B -	Iron #1 60 mL
ANDFE3109B -	Iron #2 60 mL
ATK107031 -	WaterWorks Total Iron Titrant, Grains 60 mL
ANDPH1605B -	Phenolphthalein Indicator 60 ml Sodium
ATK104501 -	CM240 Micro test paper 0-200ppm (Roll)
ATK104502 -	QT-10 "Quat" 0-400ppm test paper (Roll)
ATK104503 -	QC-1000 "Quat" 0-1000ppm test paper (Roll)

ATK104513 - pH 0-13 Test Paper
 ATK104407 - Test Tube, Measuring 9198

TestKits also available upon request:

ATK200194 Test Kit, Institutional Total Alkalinity
Reagent Reorder
 ANDAI6925A Total Alkalinity Indicator
 ANDSA1595B Alkalinity Titrant High

ATK200195 Test Kit, Institutional Chlorine Bleach
Reagent Reorder
 ANDPI1450B Potassium Iodide, 50%
 ANDST5010B Starch Indicator Solution, 1%
 ANDSA1904A Sulfuric Acid 50%
 ANDST2705B Sodium Thiosulfate 0.0365N

ATK200196 Test Kit, Institutional Hydrogen Peroxide
Reagent Reorder
 ANDSA1904A Sulfuric Acid 50%
 ANDFE3144A Ferroin Indicator
 ANDND7505B Hydrogen Peroxide