

CUSTOMER INSTRUCTIONS FOR GREEN, YELLOW OR RED ELECTROLYTE

Caution: Wear safety gloves while handling electrolyte

MANTECH Inc. has decided to discontinue the standard electrolyte. This was done with the aim of reducing shipping costs through a reduction in the amount of water present in the solution. The new electrolyte contains all solutes typically present in our previous electrolyte solutions and will only require the addition of the respective amount of water (deionized or distilled).

A 500mL bottle of the new electrolyte makes up 2L of standard electrolyte. Therefore, it requires the addition of 1.5L of deionized or distilled water.

For example, to make 2L of standard electrolyte from 500mL of new electrolyte **using the 500mL measuring cylinder provided by MANTECH**

1. Pour all the standard electrolyte in the 2L bottle provided by MANTECH.
2. Using the squeeze bottle provided by MANTECH, rinse out the 500mL bottle with deionized/distilled water and add the rinsing to the 500mL measuring cylinder provided by MANTECH.
3. Once satisfied with the rinsing, fill the graduated cylinder up to the 500mL mark with deionized/distilled water. Pour the water into the 2L bottle.
4. Then, add **two other** 500mL of water using the measuring cylinder (1L altogether).
5. Once, the water has been added, close the 2L bottle, and mix by inverting 50x or stirring using a stir plate for at least 30 minutes.
6. The electrolyte is now ready to be mixed with samples for analysis.

OPTIMIZE YOUR RESULTS. PROTECT OUR ENVIRONMENT.

Corporate Address

5473 Highway 6 North
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USA Address

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Color Range	Volume of solution bought /mL	Amount of DI Water needed to make 2L of standard electrolyte/ mL
Green	500	1500
Yellow	500	1500
Red	500	1500

For example, to make 2L of standard electrolyte from 500mL of new electrolyte **using a volumetric flask**

1. Obtain a 1L volumetric flask
2. Pour bottle of electrolyte into the volumetric flask.
3. Using the squeeze bottle provided by MANTECH, rinse out electrolyte bottle with deionized or distilled water and add to the volumetric flask.
4. Fill volumetric flask with deionized or distilled water up to the mark. Water should be added to the container dropwise once close to the marking to ensure the total volume is not exceeded.
5. Transfer the solution in the 2L bottle provided by MANTECH Inc.
6. Fill the 1L volumetric flask with 1L of deionized or distilled water. Pour water in 2L bottle.
7. Invert/swirl the 2L bottle by hand 50x or (if available) by placing on a stir plate for at least 30 minutes.
8. The electrolyte is now ready to be mixed with samples for analysis.

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CUSTOMER INSTRUCTIONS FOR ADVANCED BLUE ELECTROLYTE

MANTECH Inc. has decided to discontinue the standard electrolyte. This was done with the aim of reducing shipping costs through a reduction in the amount of water present in the solution. The new electrolyte contains all solutes typically present in our previous electrolyte solutions and will only require the addition of the respective amount of water (deionized or distilled).

A 1L bottle of the new electrolyte makes up 2L of standard electrolyte. Therefore, it requires the addition of 1L of deionized or distilled water.

For example, to make 2L of standard electrolyte from 1L of new electrolyte **using the 500mL measuring cylinder provided by MANTECH**

1. Pour all the standard electrolyte in the 2L bottle provided by MANTECH.
2. Using the squeeze bottle provided by MANTECH, rinse out the 500mL bottle with deionized/distilled water and add the rinsing to the 500mL measuring cylinder provided by MANTECH.
3. Once satisfied with the rinsing, fill up to the 500mL mark with deionized/distilled water. Pour the water into the 2L bottle.
4. Then, add **one other** 500mL of water using the measuring cylinder (1L altogether).
5. Once, the water has been added, close the 2L bottle, and mix by inverting 50x or stirring using a stir plate for at least 30 minutes.
6. The electrolyte is now ready to be mixed with samples for analysis.

Color Range	Volume of solution bought /mL	Amount of DI Water needed to make 2L of standard electrolyte/ mL
Blue	1000	1000

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For example, to make 2L of standard electrolyte from 500mL of new electrolyte **using a volumetric flask**

1. Obtain a 1L volumetric flask
2. Pour bottle of electrolyte into the volumetric flask.
3. Using the squeeze bottle provided by MANTECH, rinse out electrolyte bottle with deionized or distilled water and add to the volumetric flask.
4. Fill volumetric flask with deionized or distilled water up to the mark. Water should be added to the container dropwise once close to the marking to ensure the total volume is not exceeded.
5. Transfer the solution in the 2L bottle provided by MANTECH Inc.
6. Fill the 1L volumetric flask with 1L of deionized or distilled water. Pour water in 2L bottle.
7. Invert/swirl the 2L bottle by hand 50x or (if available) by placing on a stir plate for at least 30 minutes.
8. The electrolyte is now ready to be mixed with samples for analysis.

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CUSTOMER INSTRUCTIONS FOR PRE-MIXES

Caution: Wear safety gloves while handling Pre-Mixes

MANTECH Inc. has decided to discontinue the 1L Pre-Mixed solutions that consisted of Pre-Mixed Calibrant, Pre-Mixed Blank and Pre-Mixed QC Check Standard. The new formulations contain all the solutes typically present in pre-mixed solutions and will only require the addition of a fixed amount deionized or distilled water. The bottle sizes have been reduced to 250mL and will in turn reduce the costs of shipping.

A 250mL of either pre-mixed calibrant or pre-mixed blank or pre-mixed QC standard makes 1L of the standard pre-mixed solutions. Therefore, the addition of 750mL of deionized/ distilled water is required to ensure the new pre-mixed solution is at the appropriate concentration to work in the MANTECH systems.

For example, to make 1L of pre-mixed solution from a 250mL solution bottle **using the MANTECH 500mL measuring cylinder.**

1. Pour all the solution from the 250mL bottle in an empty 1L bottle provided by MANTECH.
2. Using the squeeze bottle provided by MANTECH, rinse out the 250mL bottle with deionized/distilled water and add the rinsing to the 500mL measuring cylinder provided by MANTECH.
3. Once you are satisfied with the rinsing, add deionized / distilled water up to the 500mL mark. Pour the water in the 500mL measuring cylinder in the 1L bottle.
4. Measure 250mL of deionized/distilled water using the graduated cylinder and add it to the 1L bottle.
5. Close the container and mix by inverting 50x or stirring on a stir plate for at least 30 minutes
6. The Pre-mixed solution is now ready to be used.

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For example, to make 1L of pre-mixed solution from a 250mL solution bottle **in a volumetric flask**

1. Obtain a 1L volumetric flask to make the pre-mixed solution.
2. Pour all the solution from the 250mL bottle into the volumetric flask.
3. Using the squeeze bottle provided by MANTECH, rinse out electrolyte bottle with deionized or distilled water and add to the volumetric flask.
4. Fill the volumetric flask up to the mark with deionized/ distilled water. Water should be added dropwise when reaching close to the marking.
5. Once all water has been added, transfer the pre-mixed solution in a container to be shaken by inverting 50x by hand or by using a stir plate for a minimum of 30 minutes.
6. The Pre-mixed solution is now ready to be used.

Pre-mixed Blank	Pre-mixed Calibrant	Pre-mixed Check Standard	Volume in bottle/mL	Amount of deionized/distilled water needed/mL
Blue	Blue	Blue (10 ppm)	250	750
Green	Green	Green (60 ppm)	250	750
Yellow	Yellow	Yellow (600 ppm)	250	750
Red	Red	Red (6000 ppm)	250	750

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