

STEP 1

STOCK CONCENTRATE PROCEDURE

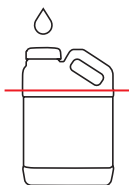
**CAUTION:** A CONCENTRATE SHOULD NEVER BE FED DIRECTLY TO YOUR PLANTS. THE CONCENTRATE MIX IS MEANT FOR MAKING A BATCH RESERVOIR.

**226** CONCENTRATE MIX RATE  
**GRAMS/LITER**

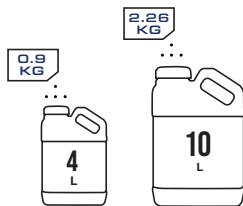
If using a different concentrate mix rate, see **Dosage Reference Guide**.



**1A** Fill container with water to about **80% of final volume**.



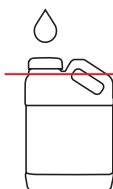
**1B** Empty entire contents of **Pro Line Pouch**. (always use a full pouch)



**1C** Mix thoroughly until all granules are dissolved. (approx 15-45 minutes)



**1D** Top off container to **final volume**. Mix one final time for 1-2 minutes to ensure stock tank uniformity before validating.



**RECOMMENDED:** Use **Concentrate Validation Procedure** to ensure proper EC has been achieved prior to feeding plants.



If desired EC is achieved, proceed to making a **Batch Reservoir**.

Athena® Pro Boxes

STEP 2

BATCH RESERVOIR PROCEDURE

**NOTE:** USE YOUR STOCK CONCENTRATE TO MIX A RESERVOIR TO FEED DIRECTLY TO PLANTS.

This procedure is for hand mixing a batch reservoir. If you are using a dosing system, refer to our **Irrigation Systems** document.



**2A** Fill reservoir with water and add **Balance**.

Follow our **Balance Procedure**.



**2B** Use this chart to determine the proper dosage of each **Pro Line** concentrate.

Dosage in mL/10 L <b>226 grams/Liter CONCENTRATE</b>		
TARGET EC	PRO GROW / PRO BLOOM	PRO CORE
1.0	27 mL	16 mL
1.5	42 mL	25 mL
2.0	57 mL	34 mL
2.5	73 mL	44 mL
3.0	90 mL	54 mL
3.5	107 mL	64 mL
4.0	124 mL	75 mL

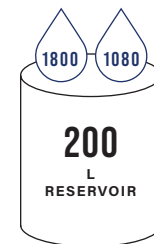
**2C** Measure each concentrate and add to reservoir separately.

**CAUTION:** COMBINING PRODUCTS IN CONCENTRATE FORM WILL GENERATE PRECIPITATION.

For example: If you have a 200 liter reservoir and wish to feed 3.0 EC **Pro Core** and **Pro Bloom** here is what to do:

**90 mL Pro Bloom**  
x 20 (200 liter reservoir)  
= **1800 mL concentrate**  
(90x20=1800 mL)

**54 mL Pro Core**  
x 20 (200 liter reservoir)  
= **1080 mL concentrate**  
(54x20=1080 mL)



**2D** Mix thoroughly; check EC and pH.

If EC is off, **troubleshoot**.



If EC is on, **let's feed**.



Read the entire Directions for Use, Conditions of Warranties, and Limitations of Liability before using this product. If the terms are not acceptable, return the unopened product container at once. By using this product, user or buyer accepts the following Conditions, Disclaimer of Warranties, and Limitations of Liability. CONDITIONS: The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness, or other unintended consequences may result because of such factors such as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of Athena Ag, Inc. All such risks shall be assumed by the user or buyer. DISCLAIMER OF WARRANTIES: To the extent consistent with applicable law, Athena Ag, Inc. makes no other warranties, express or implied, of merchantability or of fitness for a particular purpose or otherwise, that extend beyond the statements made on the product's label. No agent of Athena Ag, Inc. is authorized to make any warranties beyond those contained herein or to modify the warranties contained herein. To the extent consistent with applicable law, Athena Ag, Inc. disclaims any liability whatsoever for special, incidental, or consequential damages resulting from the use or handling of this product. LIMITATIONS OF LIABILITY: To the extent consistent with applicable law, the exclusive remedy of the user or buyer for any and all losses, injuries, or damages resulting from the use or handling of this product, whether in contract, warranty, tort, negligence, strict liability or otherwise, shall not exceed the purchase price paid, or at Athena Ag Inc.'s election, the replacement of product.

### Why Validate?

Before feeding your plants, it is best practice to make sure that you have the proper EC. Try to keep the EC between the acceptable range, found below. An EC outside the acceptable range may affect fertilizer performance.

### When to Validate?

After you have mixed your stock concentrate. This procedure is performed only from concentrate. If you have not yet mixed a stock concentrate, scan the QR code to access our **Concentrate Mixing Procedure**. Then come back to validate the EC.



**NOTE: WE RECOMMEND THESE EC METERS: MYRON ULTRAPEN™ PT1, HANNA DIST®4, APERA EC20**



**CAUTION: DO NOT VALIDATE THE CONCENTRATES WITHIN THE SAME MIXING VESSEL. EACH CONCENTRATE SHOULD HAVE ITS OWN VALIDATION.**

Concentrate Mixing Procedure →



	PRO CORE	PRO GROW / PRO BLOOM	
1	Using an accurate scale, weigh <b>1000 g</b> RO water (1000ml)	Using an accurate scale, weigh <b>1000 g</b> RO water (1000ml)	
2	Using a syringe, measure <b>10.8 mL</b>   <b>5.4 mL</b> For 113g / L   For 226g / L	Using a syringe, measure <b>18 mL</b>   <b>9.0 mL</b> For 113g / L   For 226g / L	
3	<b>EMPTY</b> syringe into water vessel   <b>STIR</b> vigorously	<b>EMPTY</b> syringe into water vessel   <b>STIR</b> vigorously	
4	<b>CHECK EC</b> Using a freshly calibrated EC meter, take reading when stabilized.	<b>CHECK EC</b> Using a freshly calibrated EC meter, take reading when stabilized.	
5	Target: 1.5 Range: 1.4 - 1.6 	Target: 1.9 Range: 1.8 - 2.0 	If EC levels are on target, let's feed. →

Read the entire Directions for Use, Conditions of Warranties, and Limitations of Liability before using this product. If the terms are not acceptable, return the unopened product container at once. By using this product, user or buyer accepts the following Conditions, Disclaimer of Warranties, and Limitations of Liability. CONDITIONS: The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness, or other unintended consequences may result because of such factors such as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of Athena Ag, Inc. All such risks shall be assumed by the user or buyer. DISCLAIMER OF WARRANTIES: To the extent consistent with applicable law, Athena Ag, Inc. makes no other warranties, express or implied, of merchantability or of fitness for a particular purpose or otherwise, that extend beyond the statements made on the product's label. No agent of Athena Ag, Inc. is authorized to make any warranties beyond those contained herein or to modify the warranties contained herein. To the extent consistent with applicable law, Athena Ag, Inc. disclaims any liability whatsoever for special, incidental, or consequential damages resulting from the use or handling of this product. LIMITATIONS OF LIABILITY: To the extent consistent with applicable law, the exclusive remedy of the user or buyer for any and all losses, injuries, or damages resulting from the use or handling of this product, whether in contract, warranty, tort, negligence, strict liability or otherwise, shall not exceed the purchase price paid, or at Athena Ag Inc's election, the replacement of product.

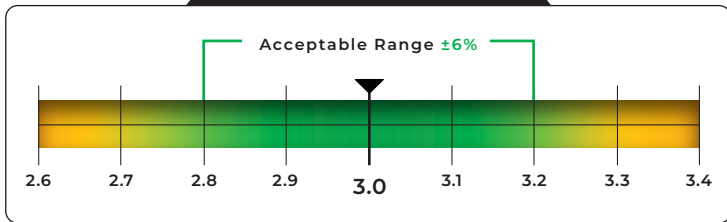


## Expected EC Tolerances

Mixing concentrate tanks is not highly accurate due to the reasons listed. Our batch testing validates that the mineral balance is **always within our established ranges** and regulatory tolerance. When mixed at any concentration, this is considered a **“reference solution”** meaning that at any EC or dosage rate, the mineral ratio is consistent.

Plants adapt to small variations in EC as they do variations in substrate pH. **Plus or minus 6% is acceptable** and will not impact fertilizer performance.

EXAMPLE: 3.0 EC TARGET



**NOTE:** A stock concentrate should always be validated by hand mixing a small batch or running through a dosing system to ensure the output to the crop is within the desired range.

## What can affect output EC?

### Containers and measuring devices

- a. Surface tension
- b. Inaccurate line markings
- c. Inaccurate filling

±5%

### Bag weight variations

- a. Absorbing moisture or dry out can vary bag weight
- b. Filling rate can vary slightly

±3%

### Meter calibration

- a. Water temperature impacts meter accuracy
- b. Old or dirty probes
- c. Manufacturer variability

±5%

### Injector settings

- a. Upper and lower ranges have different variability

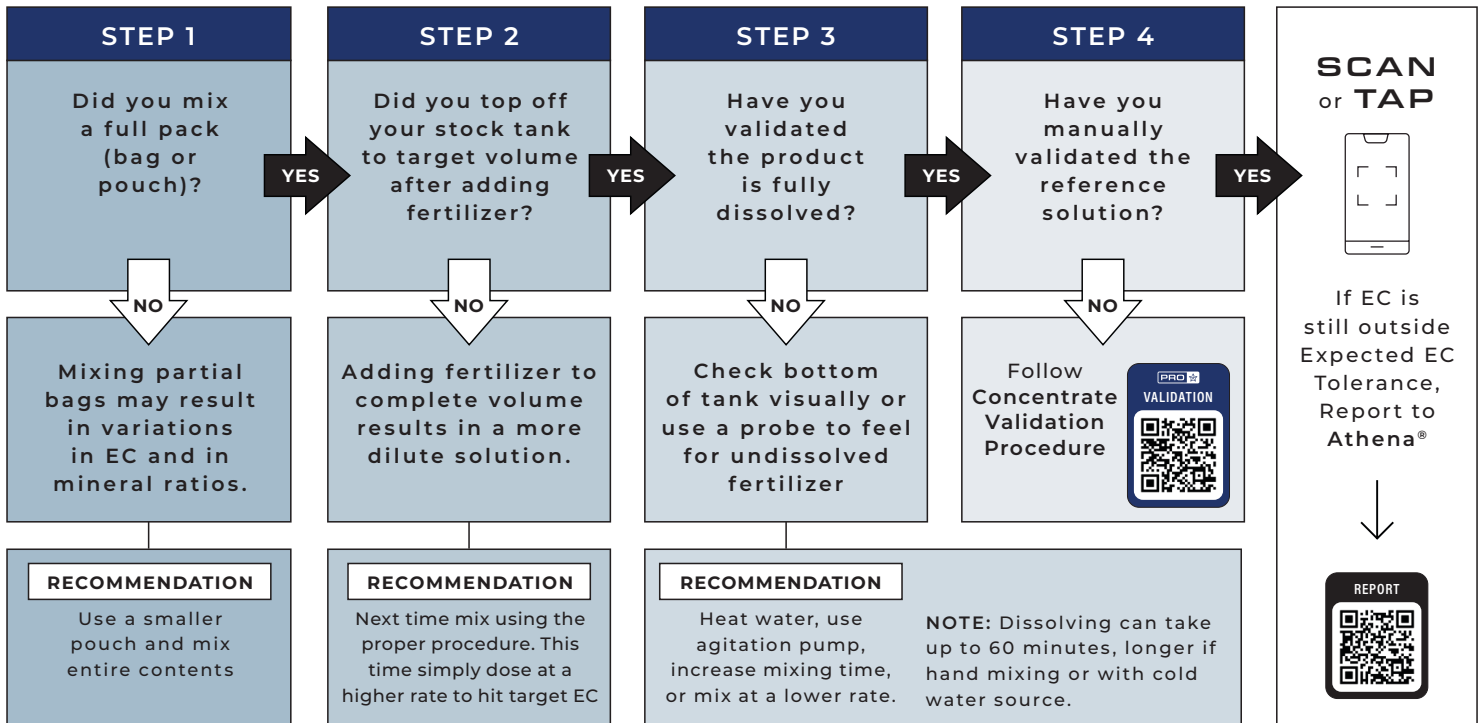
±5%

### Mixing procedure

- a. See Troubleshooting Procedure

-10%

## PRO Troubleshooting Procedure



Read the entire Directions for Use, Conditions of Warranties, and Limitations of Liability before using this product. If the terms are not acceptable, return the unopened product container at once. By using this product, user or buyer accepts the following Conditions, Disclaimer of Warranties, and Limitations of Liability. CONDITIONS: The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness, or other unintended consequences may result because of such factors such as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of Athena Ag, Inc. All such risks shall be assumed by the user or buyer. DISCLAIMER OF WARRANTIES: To the extent consistent with applicable law, Athena Ag, Inc. makes no other warranties, express or implied, of merchantability or of fitness for a particular purpose or otherwise, that extend beyond the statements made on the product's label. No agent of Athena Ag, Inc. is authorized to make any warranties beyond those contained herein or to modify the warranties contained herein. To the extent consistent with applicable law, Athena Ag, Inc. disclaims any liability whatsoever for special, incidental, or consequential damages resulting from the use or handling of this product. LIMITATIONS OF LIABILITY: To the extent consistent with applicable law, the exclusive remedy of the user or buyer for any and all losses, injuries, or damages resulting from the use or handling of this product, whether in contract, warranty, tort, negligence, strict liability or otherwise, shall not exceed the purchase price paid, or at Athena Ag Inc.'s election, the replacement of product.