# Formulation Results in form-U-net Are Incorrect

Last Modified on 01/10/2023 10:43 am CST

When running a formulation, the results are incorrect.

This may happen if the settings in *Material Group / Edit Selected Material Group* have been incorrectly edited. Follow the steps below to verify the settings.

## **Edit Data**

- 1. Verify the Product row has no values in any cell except in the Wt column, and it should have a -1.
- 2. Check the Wt column to see that every row has a 1 in it except for the *Product* row.
- 3. Check the analysis of every item in the group for accuracy.
- 4. Check the DEN column for accurate densities (cu. ft. or gallons per ton).

#### **Edit Activities**

- Check the Code column for duplicates or omissions. The Product row should be at the bottom with a Code of PRODUCT.
- 2. The Cost and Price of the Product row should be \$0.0000.
- 3. Verify all Lower Bounds are set to 0.
- 4. Verify all Upper Bounds are set to Inf.
- 5. Check the *Input Scale* column. This is the number of pounds per unit in the *Units* column. A *Unit* of *Pound* is 1, *Ton* is 2,000, etc.
- 6. Look for illogical Item Types in the Type column.
- 7. The *Mix* option should be selected on all rows. Unselecting this box still allows the item to be used in blends, but it will not appear on the screen or when printed as being used in the mix.

## **Edit Restrictions**

- 1. Check to see that all the restrictions have the correct Code.
- 2. The Cost and Price columns should be \$0.0000.
- 3. The Lower Bound should be -Inf on all rows except the Weight balance, which is 0.0000. Setting both the Lower and Upper Bounds to Inf will generate errors.
- 4. The Upper Bound should be Inf on all rows except the Weight balance, which is 0.0000.
- 5. The Input Scale default settings:
  - 1. Nutrient restrictions should be 100 with a Unit of Pound.
  - 2. Heavy Metals set to PPM will be 1,000,000 with a Unit of Pound.
  - 3. CuFt or Gal/Ton will be 2000.00 with a Unit of Pound.

4. Verify there are no duplicate *Types* that also have the same *Mix* option setting. For example, chelated Zinc will use the *Zn Type* with *Mix* unselected.

# **Edit Information**

- 1. Verify the Material System matches the Item Types used in the group.
- 2. The Product Unit of Measure is usually set to Ton.
- 3. The Mixer Unit is usually set to Pound, though sometimes to Gallons in Fluid groups.
- 4. Check the *Volumetric Mixing* setting. This changes the *Maximum Batch Size* from weight units, *Pounds*, to units of volume, *Cubic Feet* or *Gallons*, depending on the *Material System* selected.