WHAT IS CLAIMED IS:

1. A method to purify bioprocessed feedstock, wherein the bioprocessed feedstock is produced by saccharification of biomass material to produce saccharified biomass, the method comprising:

producing a first permeate from the bioprocessed feedstock by retaining material from the bioprocessed feedstock with a molecular weight above about a first molecular weight, utilizing a first membrane filter, and

producing a second permeate from the first permeate by retaining from the first permeate a second material, the second material having a molecular weight above about a second molecular weight, utilizing a second membrane filter.

2. The method of claim 1, wherein the saccharification is by treatment of the biomass material with acid.

3. The method of claim 1, wherein the saccharification is done by contacting the biomass material with enzymes.

4. The method of claim 1, wherein the biomass material is cellulosic material or lignocellulosic material.

5. The method of claim 1, wherein the bioprocessed feedstock is in the form of a slurry that includes less than about 1% solids.

6. The method of claim 5, wherein the solids have a median particle size of less than about 10 μm.

7. The method of claim 5, wherein the bioprocessed feedstock is treated to remove solids prior to utilizing the first membrane filter.

8. The method of claim 7, wherein the bioprocessed feedstock includes at least about 1 % solids before being filtered.

9. The method of claim 7, wherein the bioprocessed feedstock is treated by a method selected from the group consisting of: decanter centrifuging, disc centrifuging,

stack filtration, plate filtration, micro filtration, column filtration, Vibratory Enhanced Separation Processes and combinations of these.

10. The method of claim 1, wherein the bioprocessed feedstock is produced by further fermenting the saccharified biomass to produce a fermentation product.

11. The method of claim 10, wherein the bioprocessed feedstock is produced by further distilling the fermentation product to produce a distillation residue including at least one sugar.

12. The method of claim 1, wherein the bioprocessed feedstock comprises between about 0.1 % and about 50% xylose.

13. The method of claim 1, wherein the bioprocessed feedstock has had at least one volatile compound removed therefrom under vacuum prior to producing a first permeate.

14. The method of claim 13, wherein the volatile compound is an ester.

15. The method of claim 13, wherein the volatile compound is an alcohol.

16. The method of claim 14, wherein the concentration of alcohol in the bioprocessed feedstock is less than about 5%.

17. The method of claim 1, wherein the first molecular weight is at least about 150 kDa.

18. The method of claim 1, wherein the first molecular weight is at least about 100 kDa.

19. The method of claim 1, wherein the first membrane filter retains particles larger than about 0.05 μm from the bioprocessed feedstock.

20. The method of claim 1, wherein the second molecular weight is at least about 2 kDa.

21. The method of claim 1, wherein the first permeate has a turbidity of less than about 5 Nephelometric turbidity units.

22. The method of claim 1, wherein the second permeate has a color of less than about 200 units by the Platinum-Cobalt ASTM Test Method D1209.

23. The method of claim 1, wherein the first membrane filter and the second membrane filter are configured as cross flow filters.

24. The method of claim 23, wherein the first membrane filter and/or the second membrane filter are spiral wound filters, tube filters or hollow fiber filters.

25. The method of claim 23, wherein the first membrane filter and/or second membrane filter are configured as tube filters with a diameter between about ¼ inch and about 1 inch.

26. The method of claim 23, wherein the inlet pressure at the first membrane filter and/or the second membrane filter is between about 90 and about 500 PSIG and the outlet pressure at the first membrane filter and/or the second membrane filter is between about 20 and about 430 PSIG.

27. The method of claim 25, wherein the bioprocessed feedstock flows through the tube at a flow rate between about 1 GPM and about 20 GPM.

28. The method of claim 25, wherein the first membrane filter and/or the second membrane filter are configured as modules including two or more bundles of tube filters per module.

29. The method of claim 28, wherein more than one module is utilized to process the saccharified biomass and/or the first permeate.

30. The method of claim 1, wherein the bioprocessed feedstock and the first permeate are at a temperature between about 30 deg C and about 70 deg C when filtered through the first membrane filter and the second membrane filter.

31. The method of claim 1, further comprising concentrating the second permeate.

32. The method of claim 1, wherein the second permeate is processed utilizing a method selected from the group consisting of: evaporation, electrodialysis, electrodialysis reversal, simulated moving bead chromatography, and combinations thereof.