

Request for Information (RFI) DE-FOA-0001615: Cellulosic Sugar and Lignin Production Capabilities

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SUBJECT: Request for Information (RFI)

Responder:

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## 1: Lignocellulosic Sugars

Question 1: To which types of research entities are you willing and able to sell your lignocellulosic sugar (e.g., university researchers, national laboratories, industry/private sector)? Are there any types of research entities to whom you are not willing and able to sell your lignocellulosic sugar?

National Laboratories

Industry

University startup companies incubating in University

Question 2: What are the maximum and minimum quantities of lignocellulosic sugar you are willing and able to sell (kg)?

Up to 25 kg solids (38.5 kg syrup @ 65 Brix)

Question 3: What is the sugar concentration in your product?

65 Brix

Question 4: What physical form do you sell your sugars (e.g., solid or liquid)?

Syrup

Question 5: How do you package your lignocellulosic sugars for shipping? Do you ship in bulk?

As required

Question 6: What type(s) of biomass do you use to produce lignocellulosic sugar?

Question 7: What process do you use to produce lignocellulosic sugar?

US Mixed Southern hardwood

Eucalyptus

Bagasse

Empty fruit bunch

Question 8: What details of the scale of your process are you willing to share (e.g. batch and/or continuous/ volumetric productivity)?

Modelled volumetric productivity

Question 9: What is the typical composition of your sugar stream (e.g., glucose, galactose, mannose, xylose, arabinose) and what is the purity?

>90% glucose

Question 10: Do you routinely test your cellulosic sugar for consistency within and between lots and between feedstocks (if applicable)?

Each batch has a specification sheet

Question 11: What impurities are present in your lignocellulosic sugar process and what testing do you perform to determine the presence of impurities?

	Dextrose (g/L)	Glycerol (g/L)	Acetate (g/L)	Formate (g/L)	Succinate (g/L)	Lactate (g/L)	Cellobiose (g/L)	Xylose + Galactose + Mannose (g/L)	Galacturonic Acid (g/L)
Leaf Resources Hydrolysate	251.32	12.49	3.08	0.58	0.49	60.95	43	45.8	5.90

Lactate is high in this batch example due to contamination in the equipment process used. Typically it would be similar to the other organic acids.

Question 12: Does your process include a purification step?

We can provide additional purification as requested

Question 13: What is the highest concentration in grams/Liter you can provide?

300g/l

Question 14: Have you examined the impacts of transport and storage on sugar degradation? If so, can you please provide any relevant (non-proprietary) details of these impacts?

Stable syrup but no further data on storage or long term stability.

Question 15: What additional information are you willing and able to provide to the

research community about your lignocellulosic sugar? Please provide any nonproprietary cost information you are willing to share.

We can provide modelled cost information at a high level.

Question 16: Into what markets do you typically sell your lignocellulosic sugar? What is a typical application for your lignocellulosic sugar?

We don't intend to sell sugars, we intend to deploy the sugar platform into an integrated biorefinery making chemical products.