

## Accepted Manuscript

Title: COMBINED APPROACHES TO OBTAIN  
CELLULOSE NANOCRYSTALS, NANOFIBRILS AND  
FERMENTABLE SUGARS FROM ELEPHANT GRASS

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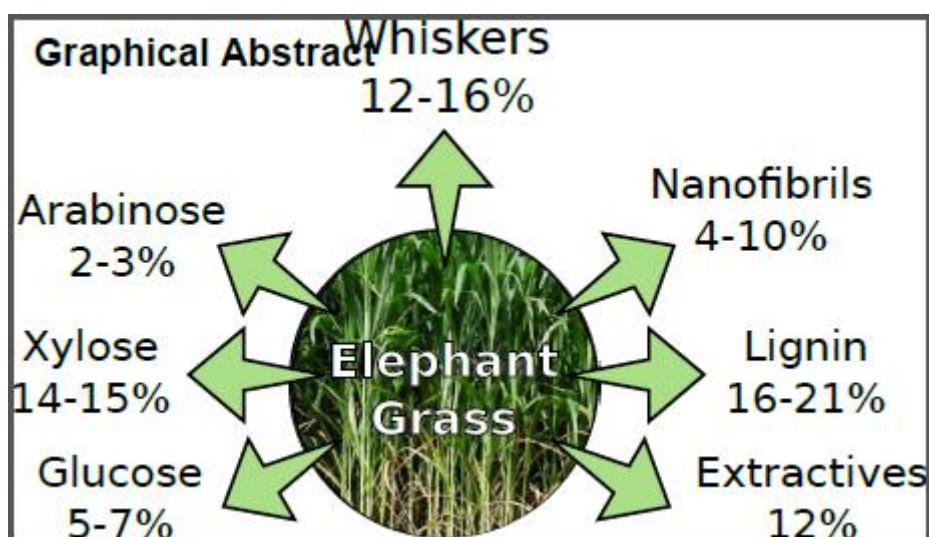
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Graphical abstract



#### Highlights

- Elephant grass was used as a cellulose source for nanocrystal extraction
- Three pretreatment methodologies were compared
- Nanocrystals presented high aspect ratio (30-44) and crystallinity (72-77%)
- Routes to combined production of nanofibrils, sugars and lignin are proposed
- Detailed quantification of by-products allow the use of up to 82% of the biomass

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