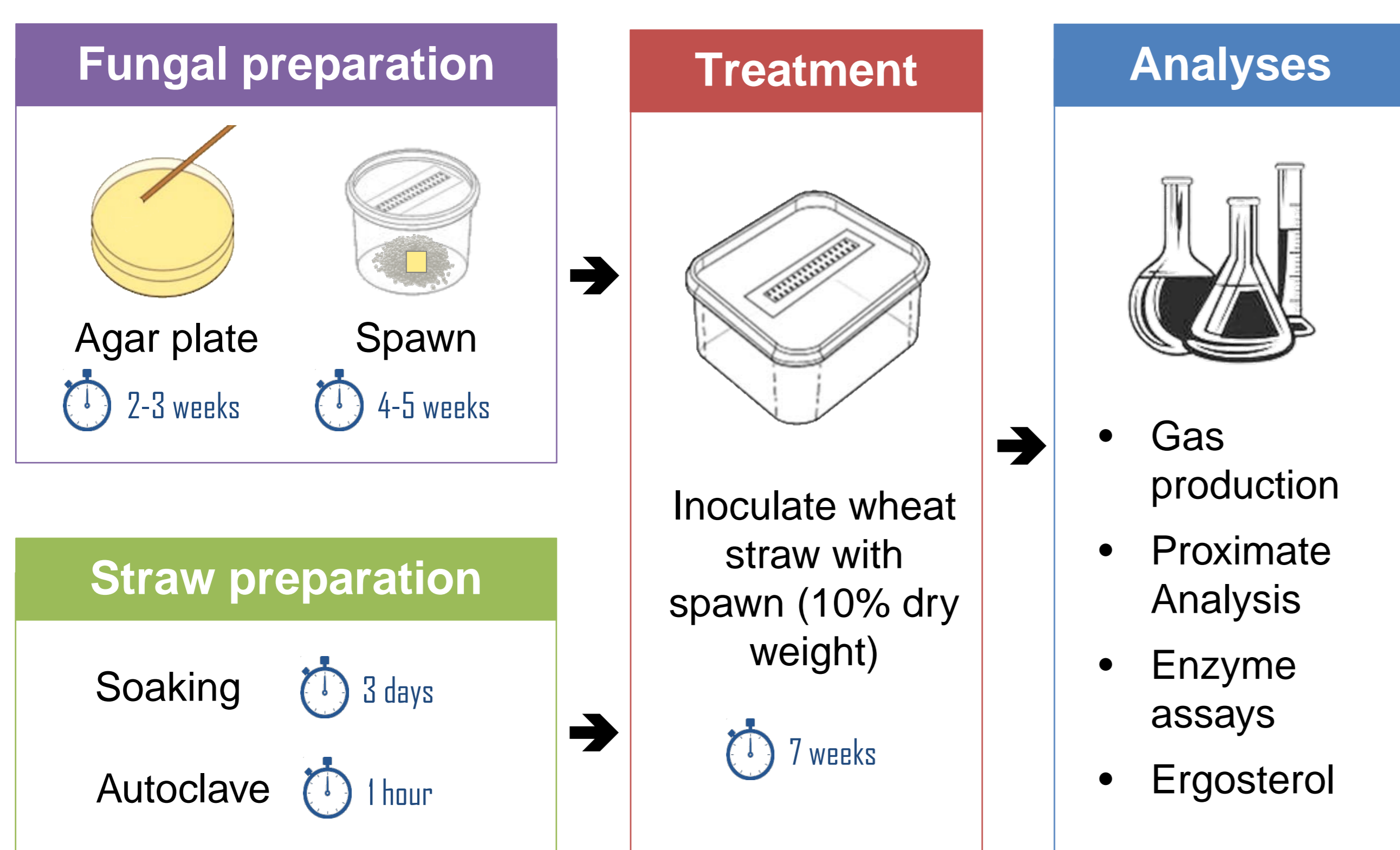


AIM

Evaluating two strains of *C. subvermispora*: MES 13094 (CS1) and MES14407 (CS2) on improving the nutritive values and *in vitro* degradability of the fermented wheat straw; and also to assess the fungal biomass production and activities of degradative enzymes.

MATERIALS & METHODS



CONCLUSION

- ❖ Both strains improve the *in vitro* rumen degradability of the treated straw (CS1>CS2)
- ❖ Both strains enzymatically degrade lignin at the beginning of the inoculation which increase cellulose accessibility at later stage

ACKNOWLEDGEMENT

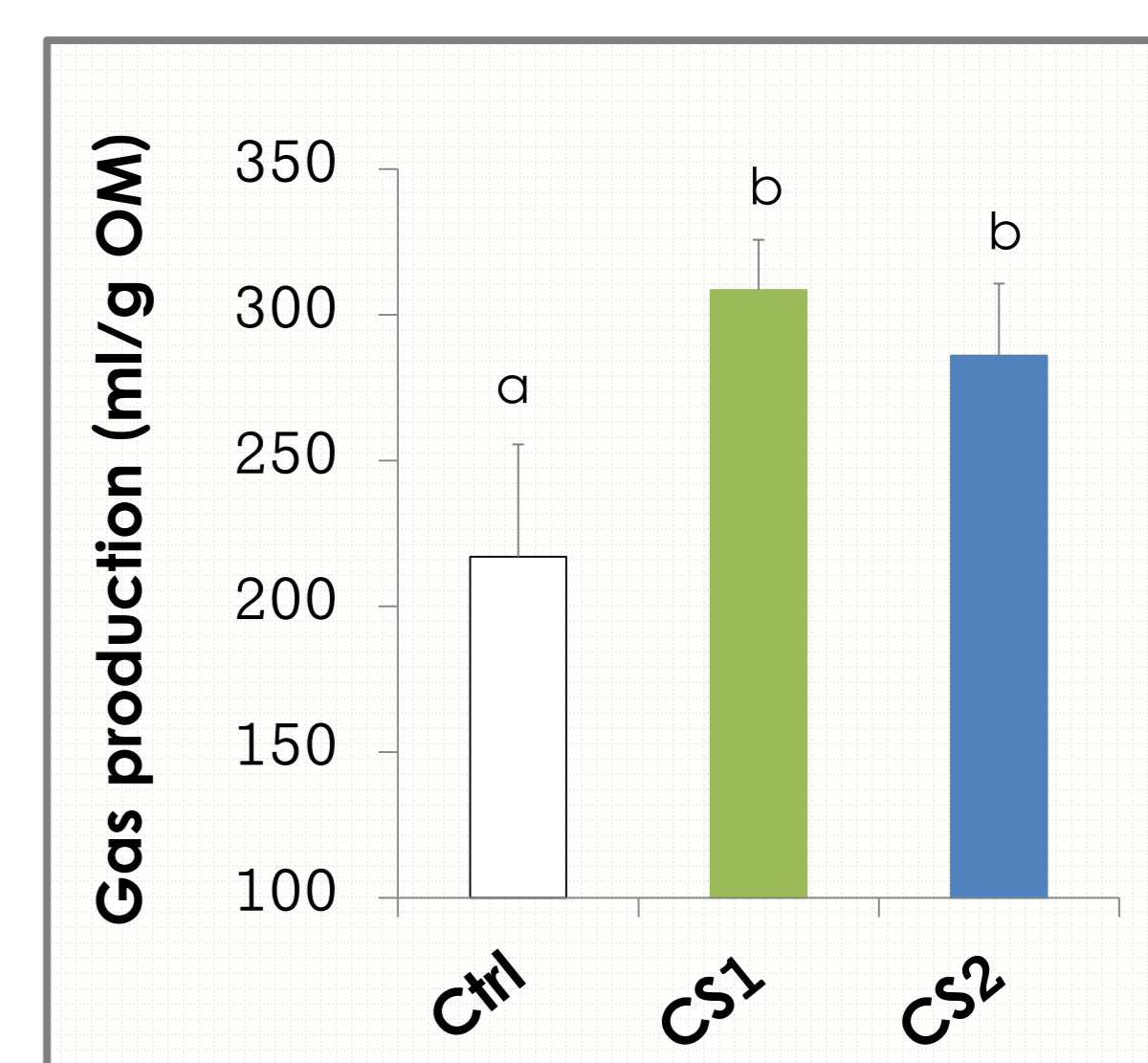
- ❖ Ministry of Higher Education Malaysia
- ❖ Universiti Putra Malaysia
- ❖ Wageningen University Fund (WUF)

RESULTS HIGHLIGHTS

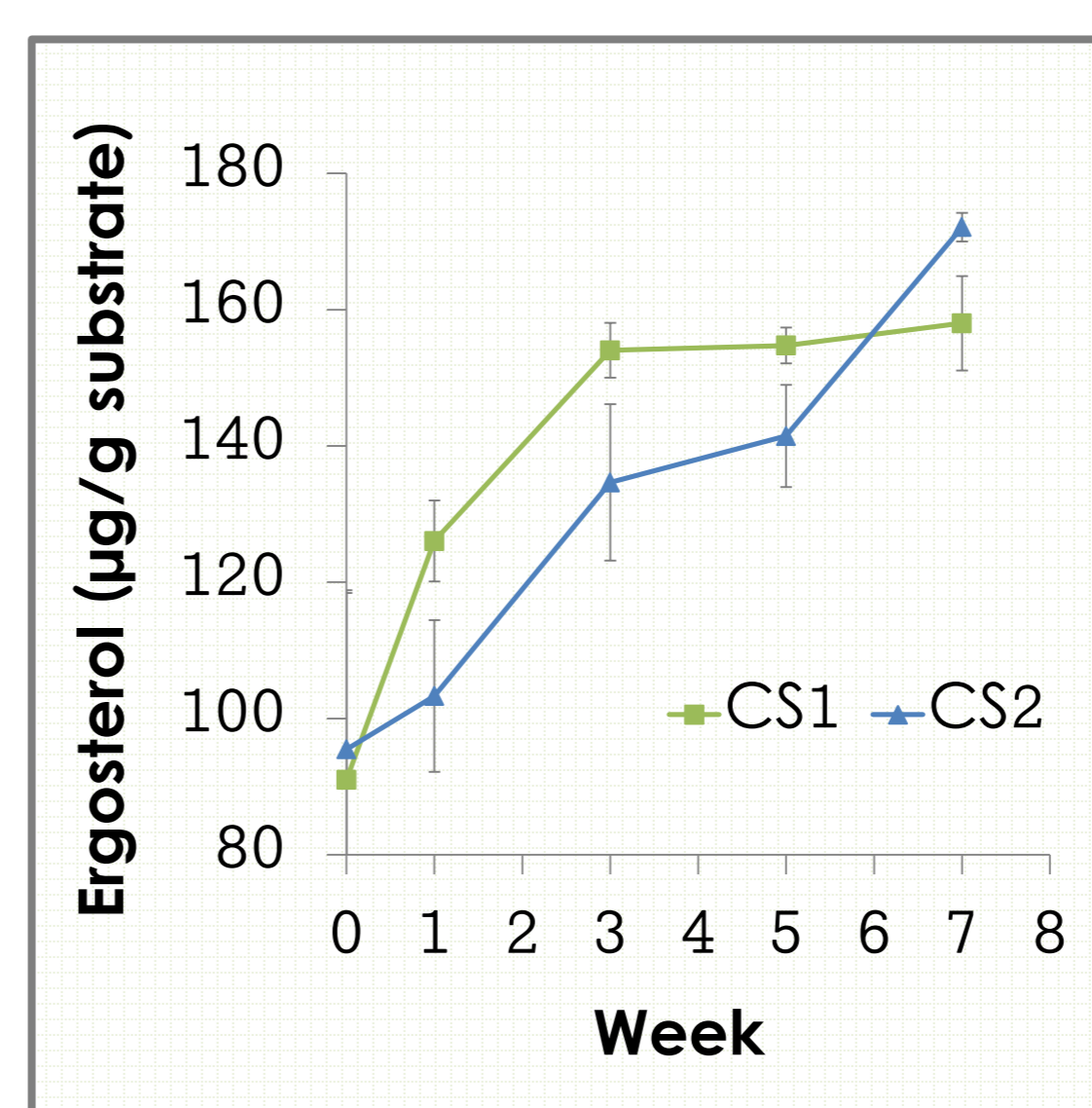
In vitro gas production at week 7

↑ **32 to 42%**

Sig. ($p < 0.01$) increase in gas production compared to for CS2 and CS1, respectively



Fungal biomass (Ergosterol)



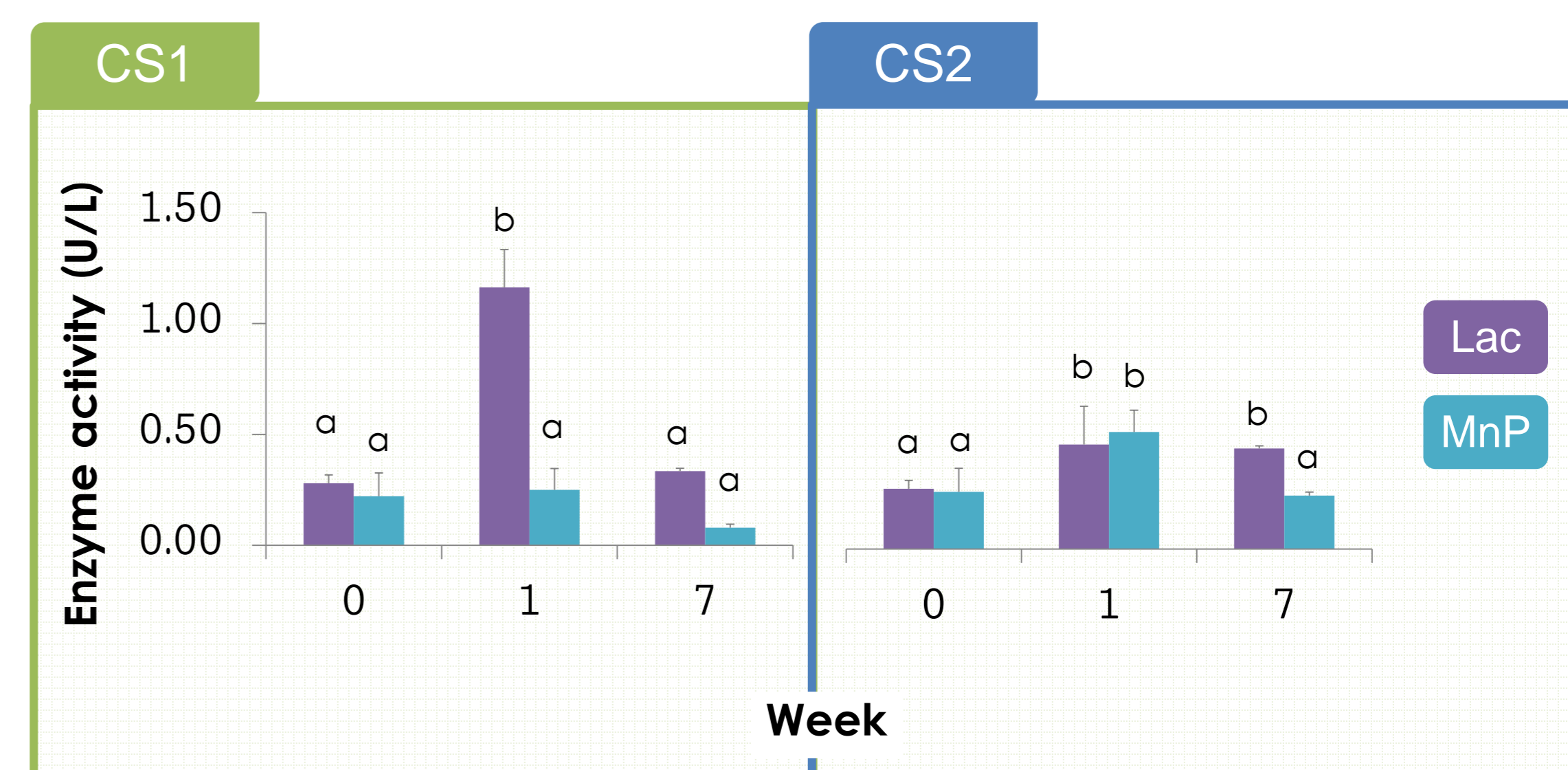
Lignocellulose composition (week 7)

Item	Ctrl	CS1	CS2
NDF	888.3 ^a	688.8 ^b	698.6 ^c
Cellulose	484.0 ^a	508.2 ^b	482.6 ^a
Hemi-cellulose	312.3 ^a	142.9 ^b	171.8 ^c
Lignin	92.0 ^a	37.6 ^b	44.2 ^c

Different superscripts within row are significant ($p < 0.05$)

Enzyme Activities

- No lignin peroxidase (LiP) was detected
- Laccase (Lac) and manganese peroxidase (MnP) activities peaked at week 1
- Lac (CS1>CS2), MnP (CS2>CS1)



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