



Fig. S1 Experimental design and operating conditions during pretreatment and anaerobic digestion

### Abbreviations

- KOH            single KOH pretreated wheat straw.
- KOH<sub>U</sub>        ultrasonic assisted KOH pretreated wheat straw.
- KOH-AD<sub>U</sub>    single KOH pretreated wheat straw digester for ultrasonic assisted AD.
- UN            untreated wheat straw for AD.
- UN-AD<sub>U</sub>     untreated wheat straw for ultrasonic assisted AD.
- Set 1         Anaerobic digestion (without ultrasonic application).
- Set 2         Ultrasonic assisted anaerobic digestion

