

BEST
Bioenergy and
Sustainable Technologies

TestB4Invest

Systematic Assessment of Pyrolysis Potential

Biochar Day, 1.10.2026

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FFG Forschung wirkt.
Bundesministerium Innovation, Mobilität und Infrastruktur
Bundesministerium Wirtschaft, Energie und Tourismus
wirtschaftsagentur wien
Für die Stadt Wien
Das Land Steiermark
Wirtschaft, Arbeit, Finanzen, Wissenschaft und Forschung
SFG
NEUES DENKEN. NEUES FÖRDERN.



Agenda

1. Method Objectives
2. Research Infrastructure
3. TestB4Invest Process
4. Examples of Work

Objectives of TestB4Invest Methodology

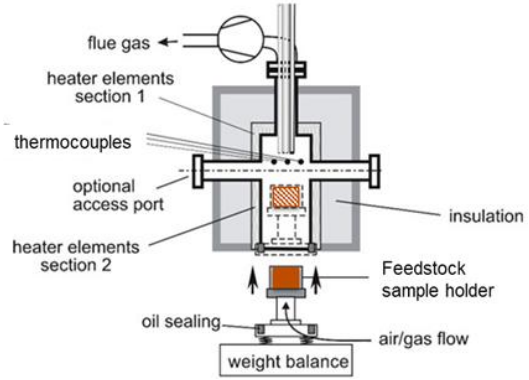
- **Technology independent assessment** of feedstocks
- **Testing and validation** in various scales (lab to pilot)
- **Feasibility assessment** of the complete process chain
- **Technical due diligence** to support technology selection and fundraising, backed by validated performance data *(e.g. product yields, carbon removal potential and energy output)*

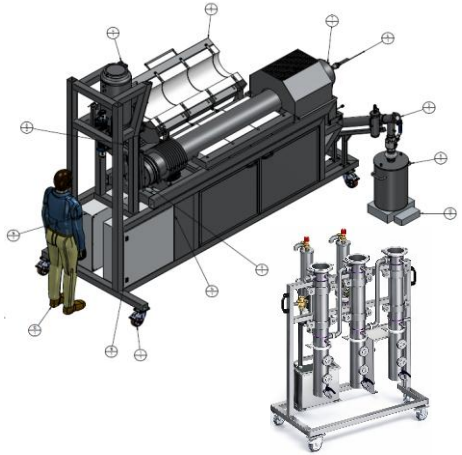
Green Carbon Lab

Feedstock analytics	Batch reactor	Continuous lab unit	Continuous pilot unit
Laboratory	GCL[Flex]400	GCL[Pyro]2k	GCL[Pyro]90k
50 mg sample size	**400 g** sample size	**2 kg/h** input capacity	**90 kg/h** input capacity

S C A L E











TestB4Invest Process

1 Feedstock-Screening

Understanding the input defines the outcome

Laboratory
Feedstock analysis & residual checklist

Is your residual suitable for pyrolysis?

2 Lab-Scale Feasibility Study

Small-scale real-world tests

GCL^{pyro}2k / GCL^{flex}400
Mass-, Energy-, C-Balance, Biochar-analytics

Quantification of outputs (products, heat/power, …)

3 Scale-up & Validation

On the road to application scale

GCL^{pyro}90k
Biochar batches up to 1 ton, Application validation

Application specific biochar up to 1 ton

4 Regulations & Integration

Understanding the regulatory and integration framework

Case specific consultation

Individual eg support technology selection / plant permit










Feedstocks & Tests

spruce pellets



poplar pellets



wood chips



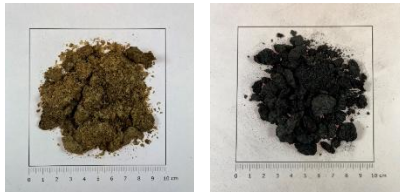
sunflower husks 1



compost screenings



coffee husks



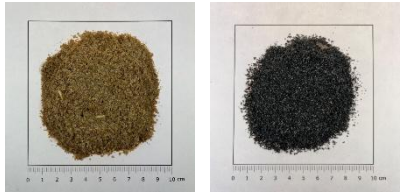
sunflower husks 2



walnut shells



wheat bran

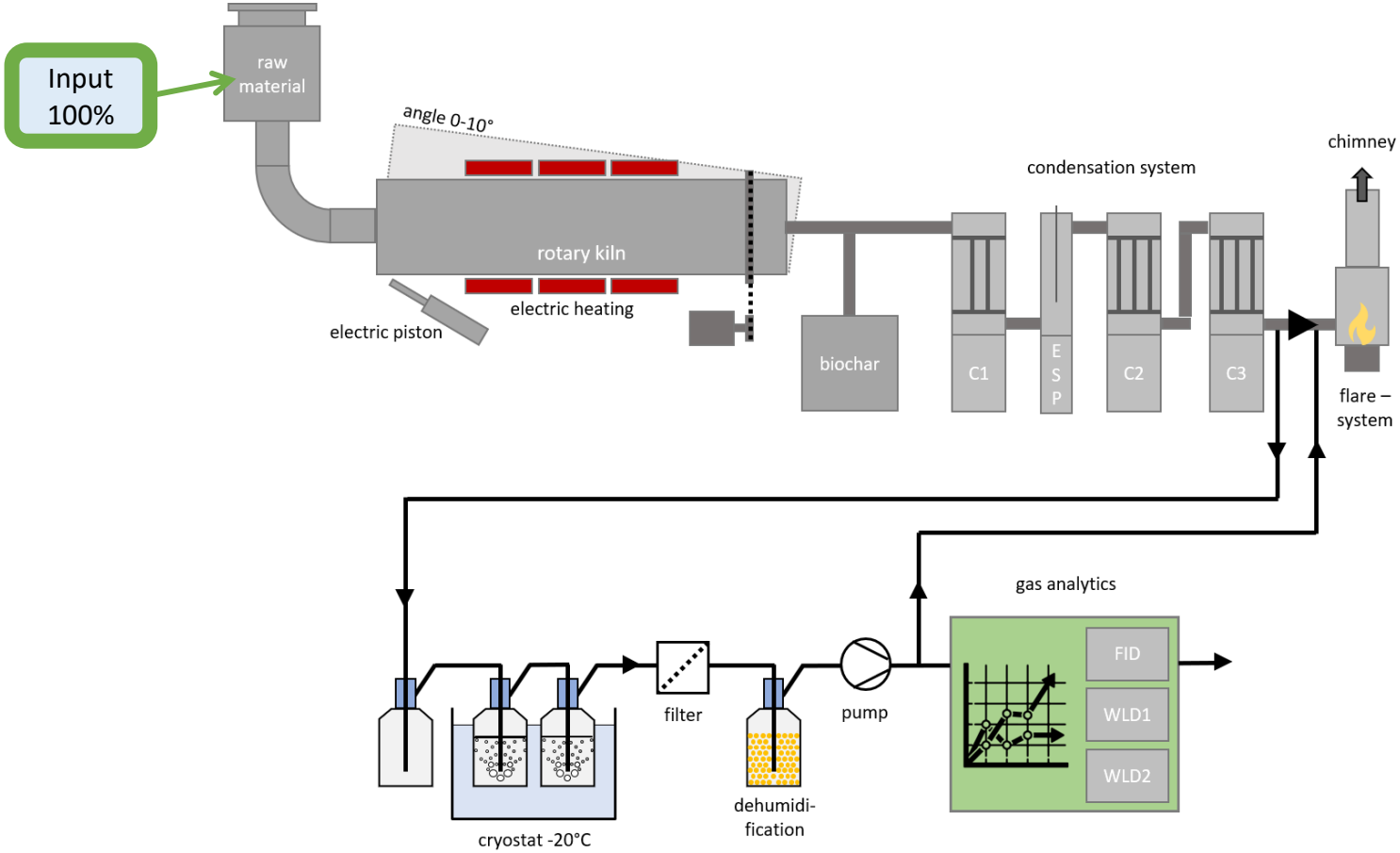


KPI‘s

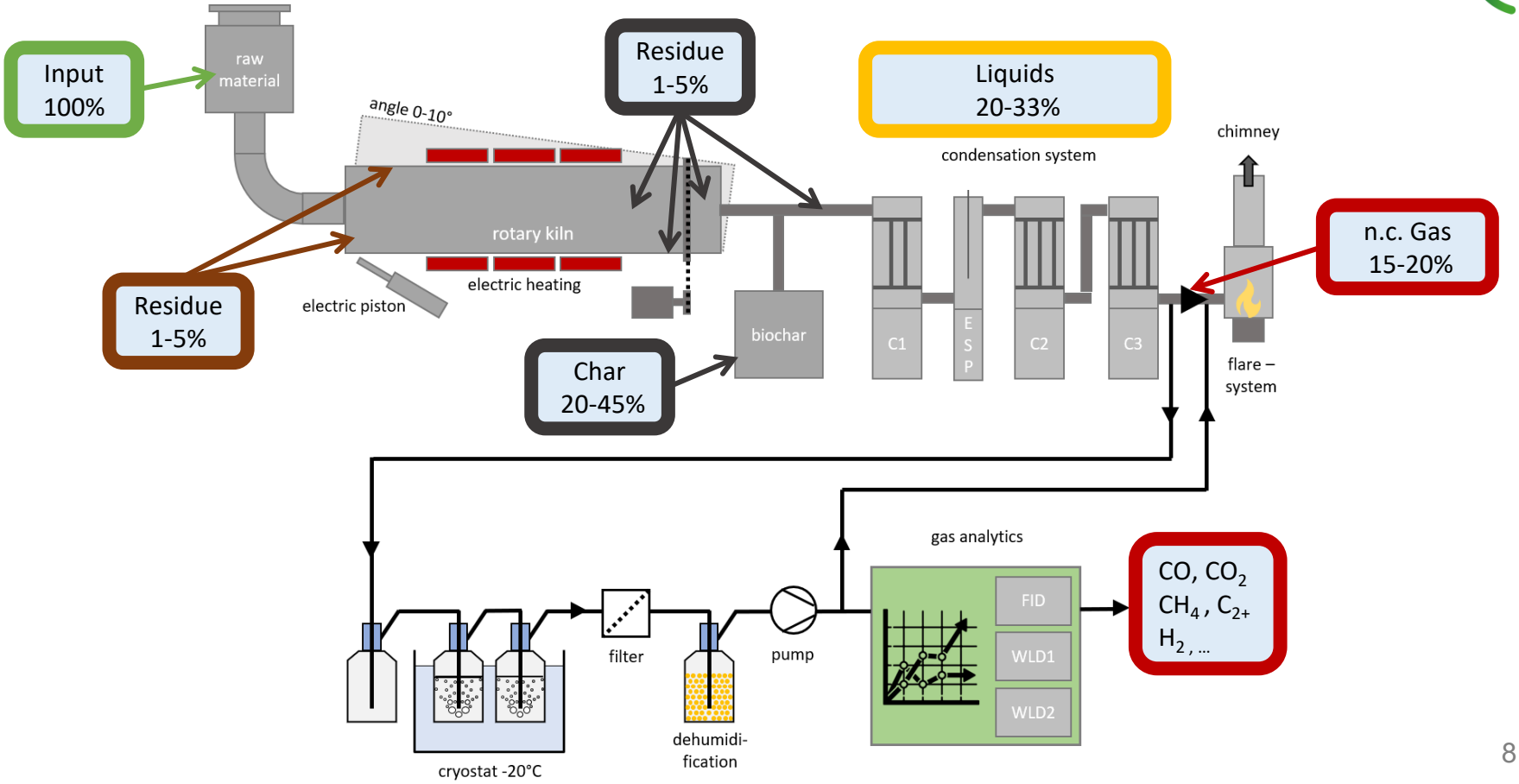
~25 feedstocks

239 tests

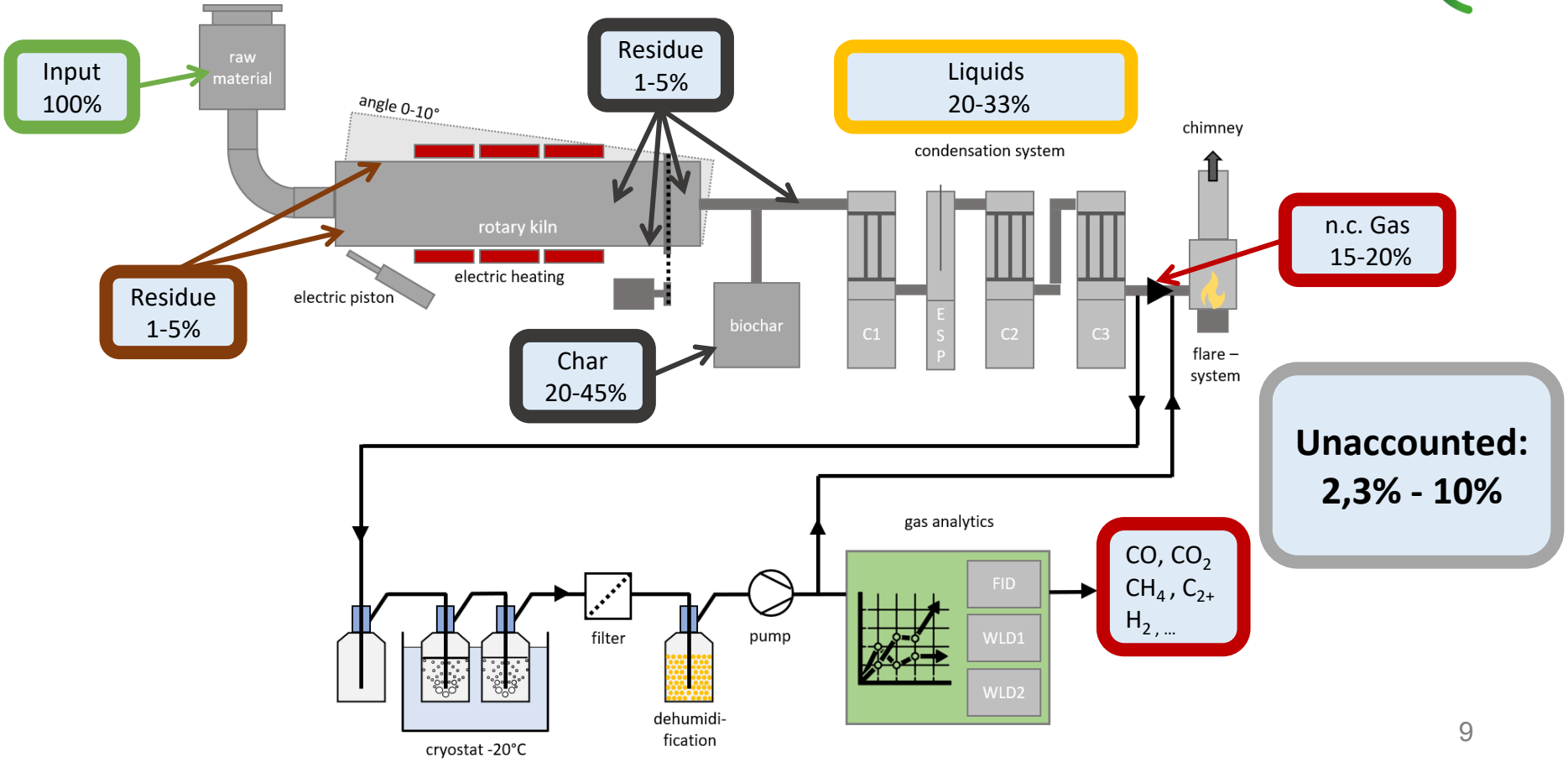
How accurate do we get?



How accurate do we get?



How accurate do we get?



Outlook: Method & Infrastructure Development

- Green Carbon Lab → Carbon Recycling Lab
- Example: Residue from mechanical recycling of municipal solid waste (MSW)



CLO-Typ A



Refinery Residue

Thank you!



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