„Closing the gap“
continuous availability of high quality microalgae biomass

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(1) GBEX – a digital market place for microalgae biomass?
(2) Consistent quality – tested and certified
(3) Reproducible production processes
(4) GBEX.de - the Global Biomass EXchange
(1) A digital market for microalgal biomass?

**Searching?**
- different quality levels
- no regulation of quality parameters by law
- varying production technology

**Quality?**
- comparable and combinable products due to standardization
- consistent quality standards to ensure stable level of valuable raw material
- reliable and traceable processes

**Comparing?**
- buy algae
- traceability: origin of production
- data sheets
- transparency

**Price?**
(2) Consistent quality – tested & certified

- make processes comparable by classifying them

standardized algae biomass – tested & certified

Quality – Quantity – Character

**INPUT**

**BIOMASS**

**OUTPUT**
(2) Consistent quality – tested & certified

**Classification**

- **Algae growth**
  - Growing system
  - Water source
  - CO$_2$-source
  - Fertilizer
  -...
  - CONTAMINATIONS ?
  - NUTRITIONAL COMPOSITION ?

- **Algae harvesting**
  - Centrifugation
  - Floating
  - Flocculation
  -...
  - ADDITIVES ?

- **Algae drying**
  - Spray drying
  - Freeze drying
  - Belt drying
  -...
  - TEMPERATURE ?

**Target market**

- **Application**
  - Nutrition value
  - Feed
  - Food
  - Cosmetic
  - Energy
  -...

- **Nutrition value**
  - Proteins
  - Lipids
  - Oils
  - Fatty acids
  -...

- **Regulations**
  - Standards
  - Halal
  - ISO 9001
  - GMP
  - Halal
  - HACCP
  - Bio-label
  -...

- **Standards**
  - CEN Algae
(4) GBEX – combined strength – purchase and sale

Producer -> B2B market place -> Customer

individual, flexible & continuous availability
broad range of algae biomass
producers tested and certified
monitoring of production
(4) GBEX – combined strength – purchase and sale

- several economic applications
- quality of biomass
(4) GBEX – combined strength – purchase and sale

- quality definition for each sector
- comparable & combinable biomass
- continuous availability of raw material
(4) GBEX – combined strength – purchase and sale

Producer --- B2B market place --- Customer

individual, flexible & continuous availability
Your benefits

✓ **From Germany** – certified quality based on standardizations
✓ **Demand-driven production**
✓ **Quality management** – exclusively quality-tested biomass
✓ **Flexible purchases** – acquire and offer biomass according to your requirements and production capacities
✓ **Availability** – just-in-time production thanks to digital platforms
✓ **Logistics** – optional booking of logistics partners
✓ **GBEX service** – qualified support by the GBEX team
✓ **Prospect** – fully automated transaction processing, which begins with adequate production control and ends with the digital conclusion of a business transaction
Thank you for your attention!

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