Used alkaline batteries
From global problem to a world-class solution
Our customers to differentiate from all the others in the industry while increasing the food production.

Recyclers and governments to turn problematic and costly waste to a premium level micronutrient – ecologically AND economically.
WHY

108 pcs/yr
>150m3/pc of H2O

7.5B 2017 -- 7.9B 2020

-2%/yr/capita

> 50%

“On behalf of the Nordic Council of Ministers we are investigating the climate efforts...one of the most significant export companies in the Nordic region.” ...presenter in the “Best cases of the Nordics”
HOW - COMPETITION
HOW – TECHNOLOGY BY TRACEGROW
TWO-FOLD OFFERING
We deliver the World’s most ecological, clean Zn- and Mn-based micronutrient products.

Perfect example of the circular economy

Developed by farmers for farmers.

An excellent uptake in the foliar fertilizer applications -> effective

**PREMIUM LEVEL LIQUID FOLIAR FERTILIZERS**

**ZM-Grow™ total average nutrient concentration:**

<table>
<thead>
<tr>
<th>Nutrient</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zinc (Zn)</td>
<td>70 - 100 g/litre</td>
</tr>
<tr>
<td>Manganese (Mn)</td>
<td>70 - 100 g/litre</td>
</tr>
<tr>
<td>Potassium (K)</td>
<td>12 - 15 g/litre</td>
</tr>
<tr>
<td>Sulphur (S)</td>
<td>80 - 120 g/litre</td>
</tr>
</tbody>
</table>

Liquid’s pH: 3.8 - 4.1
Density: 1.38 - 1.40 kg/l
Condensate pH: 3.8 - 4.1
Ready made solution pH: 4.5 - 6.5

Product fulfills official requirements for fertilizers globally.

**Argus FMB Europe Fertilizer 2017**
18-20 October • W Hotel Barcelona, Spain
ZM-GROW – RECOGNIZED QUALITY

ZM-GROW
PREMIUM LEVEL FOLIAR FERTILIZER

DISTRIBUTED BY
BERNER
Est. 1883

FOR SUSTAINABLE FARMING
PRODUCED FROM CIRCULATED CLEAN TRACE ELEMENTS

TRACEGROW
• We deliver production plants based on our groundbreaking patented technology
• Best in the world recycling efficiency of Mn and Zn – in a clean compound (app. double vs the prevailing method)
• Solves the alkaline battery waste problem globally – safely, responsibly and economically.
• Excellent investor profitability.
• Strong support throughout the project phase.
- 1500m²+1500m² (+ storage)
- 3000t/yr of Alkaline batteries
- 2400t/yr of BM
- 5.2Ml/yr of ZM-Grow (@80%)
- Professional project implementation by a world class engineering and project management partner in 9-14 months
TECHNOLOGY DELIVERY – EPS PROJECT MODEL

- Pre-sales study
- Budgetary quotation
- Development & negotiations
- Black mass pilot tests
- Project kick-off
- Basic Engineering
- Engineering, procurement and supervision (EPS)
- Construction by Client
- Commissioning & start-up
- Performance testing
- Warranty period

Est. 1958
FACTORY IN FINLAND
<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>Interests</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investor</td>
<td>Economically very viable</td>
<td>Investment in the attractive business area</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Attractive payback</td>
</tr>
<tr>
<td>Farmer</td>
<td>Additional opportunities due to sustainability</td>
<td>Premium level foliar fertilizer</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Excellent user experience</td>
</tr>
<tr>
<td>Legislator / Government</td>
<td>Solving the alkaline waste problem – safely, responsibly</td>
<td>Micro nutrients is a world wide business (est. 4.9B€ 2017, 7.9B€ 2020) – reducing the imports, possibly increasing the exports</td>
</tr>
<tr>
<td>Recycling company</td>
<td>Method for improving profitability</td>
<td>Ecological method with unsurpassed recycling efficiency for Alkaline battery waste</td>
</tr>
<tr>
<td>Distributor</td>
<td>Same results as with other products but the world’s only ecological choice</td>
<td>Country: Investing in sustainable and economically strong technology</td>
</tr>
</tbody>
</table>
FORERUNNER IN KAZAKHSTAN

Interested to be in a forefront? Contact:
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