APPENDIX-A

Cost analysis calculations for RHA production are done based on the prevailing laboratory conditions as follows:

The husk was purchased from the near-by local market (rice mill located at T.N. Palayam). The lead was accounted for the Pondicherry Engineering College premises. The husk was incinerated in an electric box furnace (Laboratory type). The grinding of ash was done in a ball mill. One kilogram of ash is ground for 30 minutes duration. The cost was arrived for the production of 100 kilogram of ash.

i) **Cost of raw material:**
   a) Cost of husk = Rs.55 per 100 kg
   b) Husk required to produce 100 kg of ash = (100/0.2) = 500 kg
   c) Cost of 500 kg of husk = 500 x 0.55 = Rs. 275/-

ii) **Transit cost:**
   a) Transit cost for the husk = Rs. 80 per 100 kg.
   b) Transit cost for 500 kg of husk = 500 x 0.80 = Rs. 400/-

iii) **Cost of incineration:**
   a) Electrical energy required to produce 1 kg of ash in furnace = 3.33 kWh.
   b) Electrical energy required to produce 100 kg of ash = 100 x 3.33 = 333 kWh
   c) Cost for 1 unit power of electricity used for industrial purposes = Rs.2.60/-
   d) Incineration cost of 100 kg of RHA = 333 x 2.60 = Rs. 865.80/-

iv) **Grinding cost:**
   a) Electrical energy required to grind 1 kg of ash = 0.375 kWh
b) Electrical energy required to grind
100 kg of ash

= 100 x 0.375
= 37.5 kWh

c) Grinding cost for 100 kg of ash

= 37.5 x 2.60
= Rs. 97.50/-

v) **Total cost of production for 100 kg of ash:**

1. Cost of raw material - Rs.275.00/-
2. Transit cost - Rs.400.00/-
3. Incineration cost - Rs.865.80/-
4. Grinding cost - Rs. 97.50/-

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost (in Rs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>1638.30</td>
</tr>
<tr>
<td>Others (10%)</td>
<td>163.80</td>
</tr>
<tr>
<td>Net Cost</td>
<td>1802.10</td>
</tr>
</tbody>
</table>

Therefore the cost of production for one kg of ash

= (1802/100)
= Rs.18/-
PUBLICATIONS BASED ON THIS RESEARCH

a. JOURNAL


b. CONFERENCES


