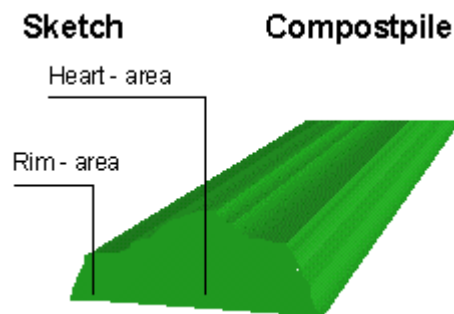


# Report on use of BioAktiv Powder in GKR Large Komposting Plant Velbert Habertstrasse - Plöger Steinbruch 42557 Velbert Germany

At 2. December 1996 has the GKR-Company in Velbert heaped up 2 equal compost piles with about 60 tons of green material and bio-garbage. The material was shredded and riddled from parts > 30 mm.

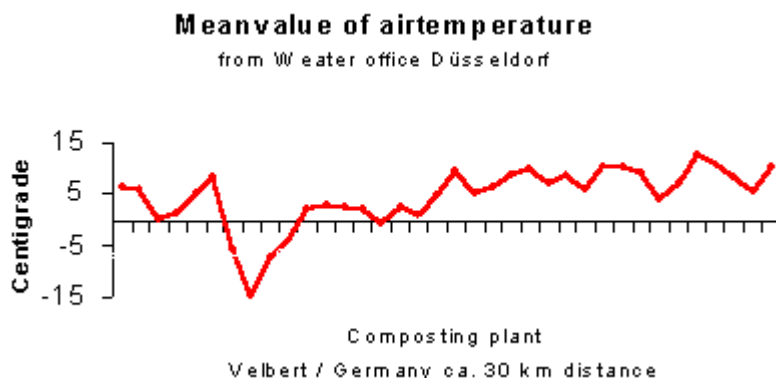
One pile stayed untreated. On the other pile were brought out 4 kg BioAktiv-powder for composting that way, that the powder was soluted in 600 litres of fresh water and sprinced over the pile.

The first measuring was executed at 5.12.1996 and then repeated all 3 - 5 days. The found out values were taken to make graphic diagrams.



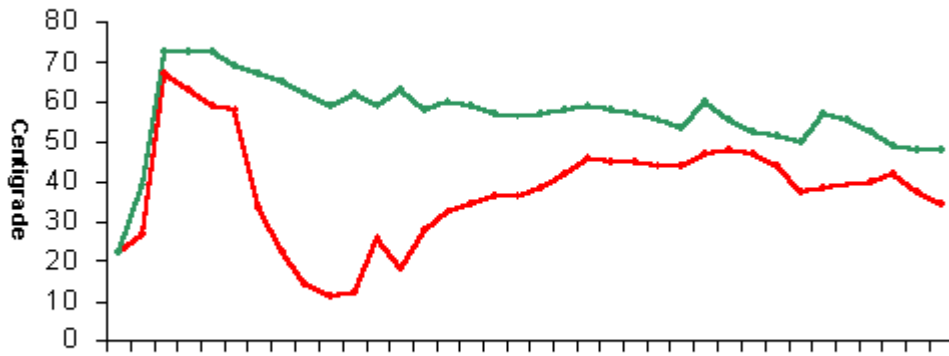
## Valuation:

### 1. Temperature



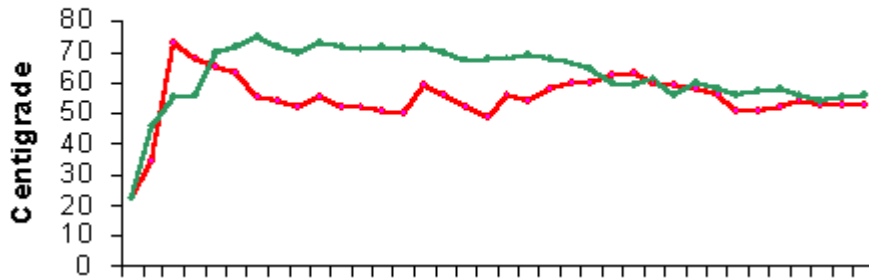
### Compostpile 05.12.96 - 09.04.97

Temperature in the rime-area 80 cm deep



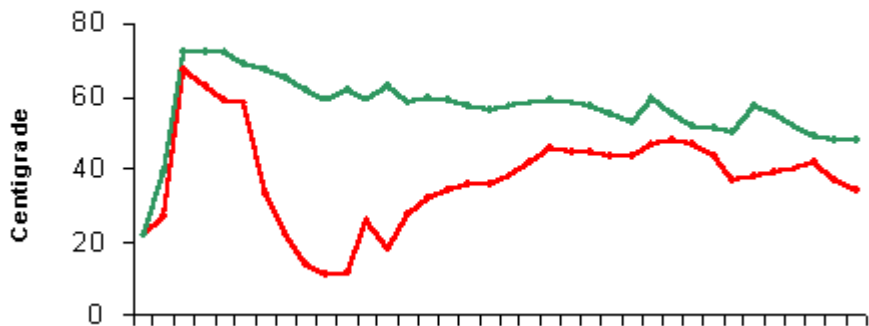
green - with Bio Active , red - without Bio Active

### Temperature in the heart-area 80 cm deep



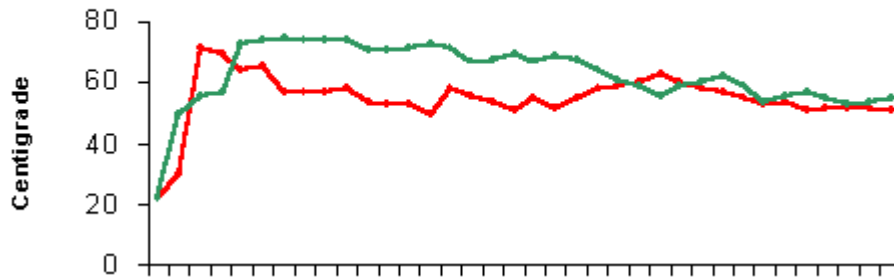
### Compostpile 05.12.96 - 09.04.97

Temperature in the rim-area 160 cm deep



green - with BioActive, red - without BioActive

**Temperature in the heart-area 160 cm deep**



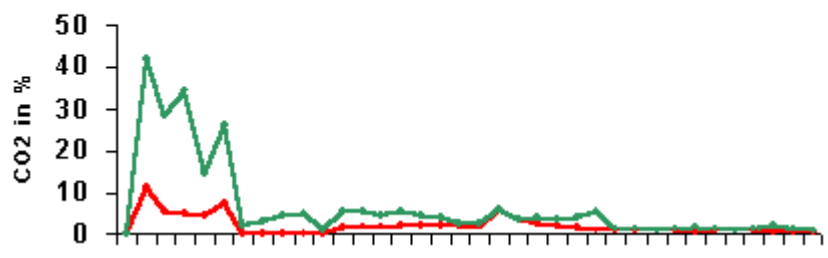
The first diagram shows air-temperature over the whole time of observation. It shows the daily mean-values. These have been significantly lower sometimes during the night.

The 2nd - 4th diagrams are showing, that the BioAktiv-pile has a higher, but also evenly constant course of temperature in all parts. The outside-airtemperature does not affect so much. The higher encrease of temperature proves, that aerobe bacteria are working stronger in BioAktiv treated piles.

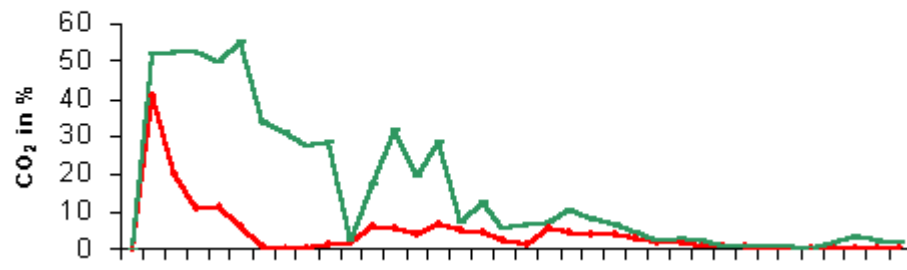
2. Content of CO<sub>2</sub> in %

**Kompostpile 05.12.96 - 09.04.97**

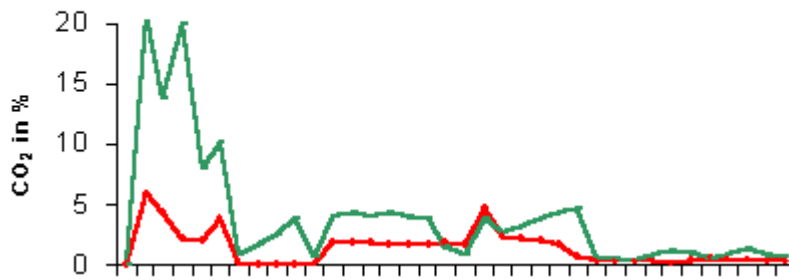
CO<sub>2</sub> % in the rime-area 80 cm deep



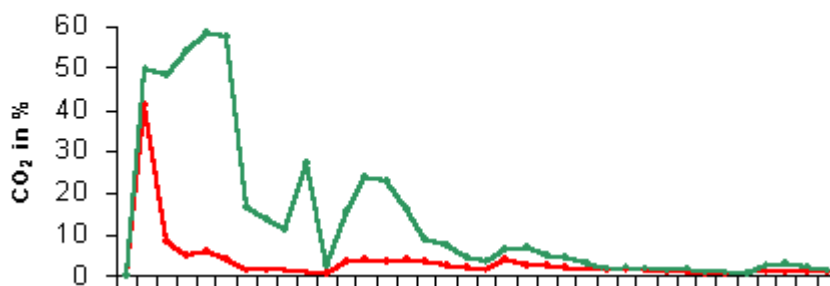
**CO<sub>2</sub> % in the heart-area 80 cm deep**



**CO<sub>2</sub> % in the rime-area 160 cm deep**



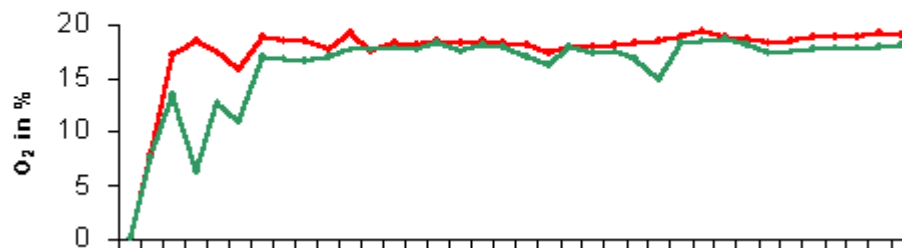
**CO<sub>2</sub> % in the heart-area 160 cm deep**



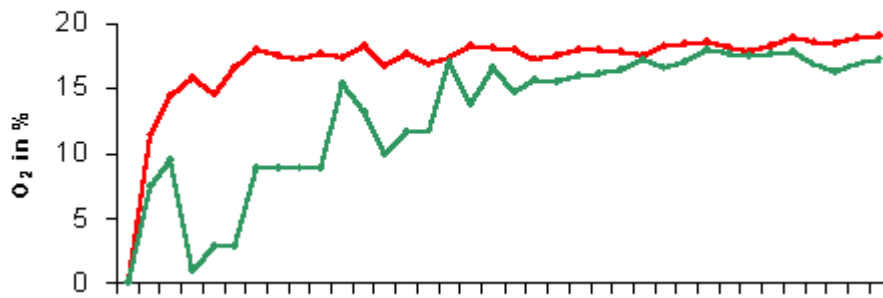
The CO<sub>2</sub>-values, measured in the BioAktiv-pile are significantly higher. The reason is, that the aerobic bacteria are decomposing essentially more carbohydrates by "breathing in" oxygenium and "breathing out" CO<sub>2</sub>. The real composting-process is working stronger in the BioAktiv-pile.

### 3. Content of oxygenium in %

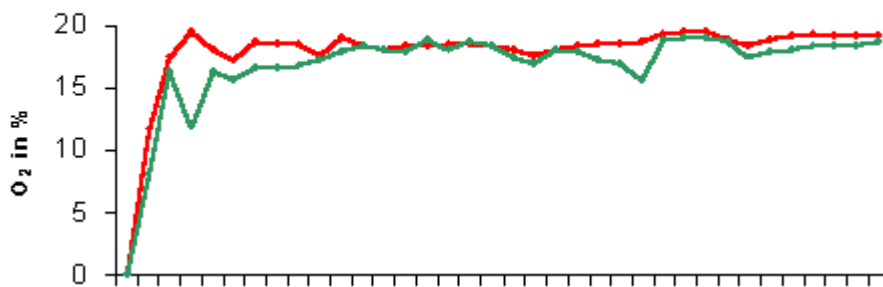
**O<sub>2</sub>-content in the rime-area 80 cm deep**



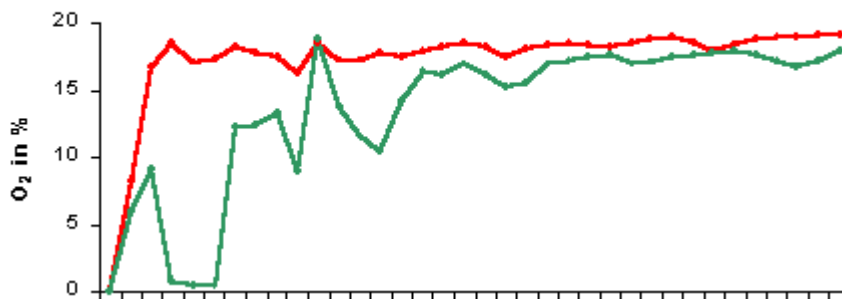
**O<sub>2</sub>-content in the heart-area 80 cm deep**



**O<sub>2</sub>-content in the rime-area 160 cm deep**



**O<sub>2</sub>-content in the heart-area 160 cm deep**



The content of O<sub>2</sub> is exactly reciprocal to the CO<sub>2</sub>-values. That shows same: The aerobic bacteria are consuming quickly all available oxygenium.

#### Conclusion

1. Use of BioAktiv-powder for composting improves and shortens duration of the composting-process.
2. Use of BioAktiv-powder for composting relieves environment.
3. Use of BioAktiv-powder for composting improves quality of compost.
4. Use of BioAktiv-powder for composting improves output of composting-facilities.

