

# Coir Chemically

Growing always starts with the best base

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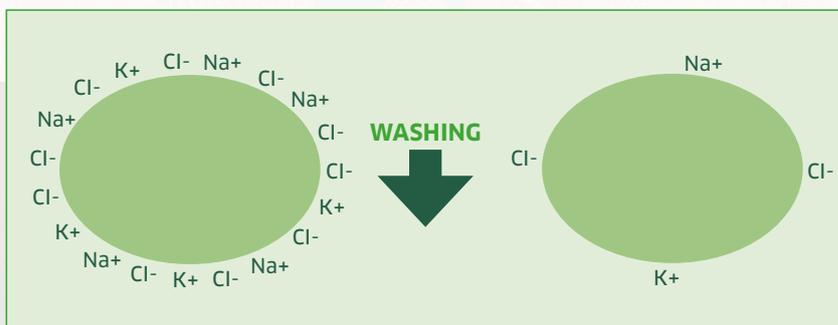
The chemical properties of coir determine the availability and absorption of fertilisers. At first sight, coir products all look the same but looks can be deceiving. Chemically there can be large differences that ultimately determine whether the coir used is suitable for plant cultivation or not. There are four distinct qualities: unwashed, washed, buffered and our innovative Shakti Amla® coir.

## Unwashed coir

Coconut trees are able to grow naturally in areas with high salinity. The salts that are not used by the plant are stored in the coconut. These salts consist primarily of sodium, potassium and chlorides. In unwashed coir, the material does not go through any treatment and the E.C. of the material can rise to 6 mS/cm or higher (measured in a 1:1.5 volume extract). Without treatment, this material is unsuitable for plant cultivation.

## Washed coir

The excess salts such as sodium, potassium and chlorides are 1-value elements that can be washed from the coir products with clean water. In this process, the salty, 'free' water is replaced by cleaner, less salty water. Success depends on the water quality used.



## Washed coir

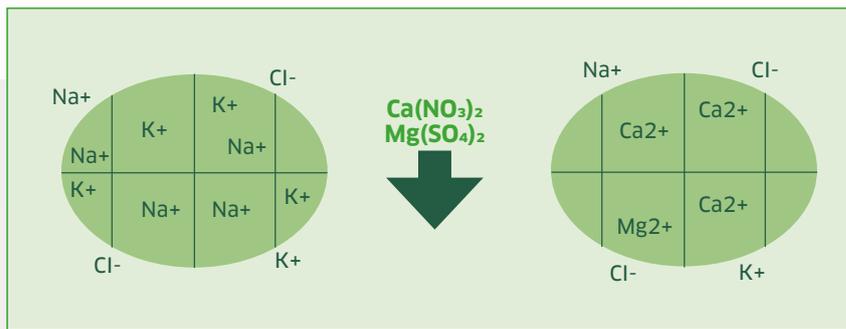
For washed material the E.C. is < 1 mS/cm



### Buffered coir

Coir has a CEC (Cation Exchange Capacity) complex. This is a negatively charged complex to which mainly sodium and potassium are bound. During cultivation, these elements are exchanged with stronger elements from the fertiliser, like calcium and magnesium. This gives an uncontrollable

and undesirable effect on the availability of fertilisers. In buffered material, this exchange is already done in our factories to avoid unforeseen releases of potassium and sodium from the complex and to increase the grower's control of fertilisation. Buffered coir is chemically stable.

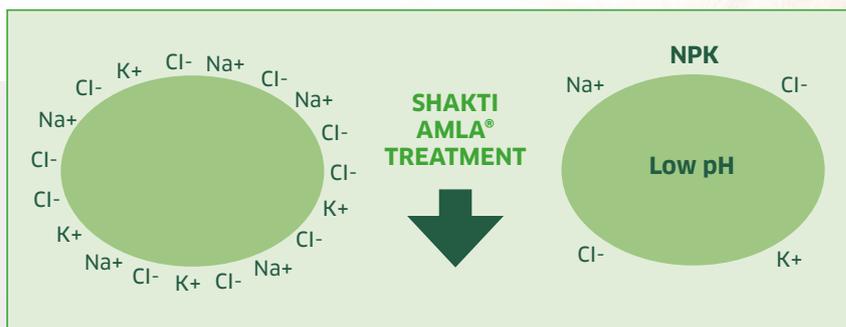


Buffered coir

### Our innovative Shakti Amla® coir

The pH of coir products is naturally between 6 and 7. Most crops require a lower pH. This gives better root growth, stronger plants and better absorption of trace elements. Klasmann-Deilmann has overcome this with the use of innovative Amla® coir.

The CEC complex is exchanged and pH is adjusted. Shakti Amla® coir is chemically stable and suitable for a wide range of crops, even for crops that require a low pH.



Shakti Amla®

### Shakti Amla® in new growing media

In the increasing demand for new growing media where peat is often replaced, pH is one of the most important points to consider. The natural low pH of peat has a lot of benefits for plant growing, root development and availability of elements. Most alternatives increase pH and have no

pH-buffer at all. Shakti Amla® can help in solving this issue by keeping the pH low and having a positive effect on the pH-buffer. While other peat replacements always have to be blended with other constituents, there is almost no limit to the use of properly treated coir.

## DISCLAIMER

The information in this brochure is based on our current knowledge and does not claim to be complete or correct. We reserve the right to make changes. We do not assume any guarantee or liability for successful cultivation, as the use of our products must be adapted to the individual site, storage and cultivation conditions of the respective nursery, which is beyond our knowledge and influence. The information in this brochure cannot replace individual advice. They are neither binding nor part of a consulting or information contract.



Find out more  
about our premium  
coir raw materials

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*we make it grow*