

CHAPTER 12

ADIANTUM CAPILLUS VENERIS

During the comparison of metal contents present in different effective herbs with that of main selective herb *Adiantum capillus veneris*, it has been found that concentration of trace metals was average, while concentration of chromium was little more and bulk metals except calcium were in lower amount. Low water solubility of these metals was observed. Only 16% of these metals were found in water extract. The concentration of calcium was a little high in this sample (9.79 mg/g). Therefore its water extract can be utilized as a source of calcium.

The alarming point about this herb is the estimated concentration of lead and cadmium which is high. Even in water extract, detectable amount of these metals were present. It shows that a longer use of these herbs may create complications due to the accumulation of insoluble salts of these metals. Nickel is also found in high amount in this specie.

The calculated average molecular weight was found low. This indicates the presence of some hidden metals which were not detected, but present in calculated mmoles.

Similarly glucose test showed that water extract was 15 times more effective than acid extract as observed in other herbs. Water extract also had very low concentration of toxic metals (Pb, Cd and Ni), therefore, it is safer to use it as compared to solid, but still not advisable for continuous use.

The main reason to study the ACV as targeted herb was the regular and prolong use of its water extract by one of my professor. In his opinion diabetes was controlled but cause of his death was diagnosed as cancer.

After all the above discussion it may be concluded that:

- It might be good for sugar control, but due to the high concentration of toxic metals present in it, it is not preferable to use for any purpose.
- Water extract may be more safe and effective but its continuous consumption may produce an alarming situation.

FURTHER STUDIES RECOMMENDED

- Detection of vanadium and some other metals also can be check.
- Other parts of ACV (leaves and roots) may also be checked.
- Its effectiveness in other diseases can be studied.
- Enzyme activity of this and other selected herbs may also be checked.
- Phytotoxicity of these plants and different parts of these plants may also be checked.
- Antifungal, microbial and cytotoxic activity.
- Study of metal dependent hypoglycemic activity by the varying metal contents with external addition.
- Application of other analytical methods like GLC and HPLC.
- Non metallic component of the plants are also may be studied in detail.
- In vivo study can also be done