Air pollution effects on the structural assignment

Environment, Air



The soil was slightly alkaline sandy loam at all the sites. Nitrogen content of the soil was minimum at the highly Polluted site (site III), and maximum at site V. Soil sulfur was low at sites I and IV. Potassium in soil was lowest at Ethel I most polluted site. The length and width of phloem fibers, skive tube elements, relative proportion of skive tubes and fibers, amount loft conducting phloem and the vascular tissues in the petiole of leaf of both species decreased at all sites n all seasons.

I However, proportion of axial permanency and ray permanency of conducting phloem in the stem increased. The net photosynthetic rate and stomata conductance of leaves declined at the polluted sites but the I intracellular CA concentration increased. The nitrate, sugar and sulfur contents of leaf and secondary phloem enhanced at almost all sites, with the I I maximum enhancement at site III. However, the reduced nitrogen, reducing sugar and sulfate contents in both leaves and bark I Decreased at all sites. The pharmacologists parameters varied with respect to pollution.

Loss on drying, per cent ash value content, I Atwater-soluble ash, sulfated ash and acid insoluble ash contents were enhanced with respect to pollution load. The various I lacerative values increased at various distances from the pollution source. The maximum increase was recorded at 8 km from I Lethe pollution source. However, the petroleum ether extractive decreased with respect to site V. Tannin content decreased proportional to the pollution load in case of A. Indict. Reduction in the crude fiber was also observed.

The protein content crude protein) declined under pollution Sisters in both A. Indict and D. ISO. I Several compounds, mostly flavorings, torpedoing and

fatty acids, were isolated from the barks of A. Indict and D. I Sissies. Their amounts declined under pollution stress. Flavoring content in the leaves of both the trees also reported decreased. Few new compounds were isolated through column chromatography in order to mark them as reference or marker quantitative estimations. Compounds isolated from the bark of A. Indict are; I compounds for RAN-1 5-methyl-n-attraction. RAN-2 n-heptathlon-8-lo

RAN-3 n-Hispanicize acid RAN-4 2, 6, 10, 14-tetrameters-pentacle-8-en-2, 7-idol RAN-5 2, 6, 10-trimester-14-expectantly-n-transcend-AAA-ii RAN-6 5, 7-dine, b-lo-b-D-clearinghouse RAN-7 9, 9-timely-Decca -7-en-2-lo-11 , 12-idiotic acid Compounds isolated from the bark of D. ISO are; RD-I n-hexagons-5-01 -yell propionate RD-2 n-terracotta-5-ii -yell propionate RD-3 6-Hyde RD-4 9, 1 1 , 12-thyroxin-I D-interchangeable-14, 1 7-[OH]-pray Plants have a greater capacity to accommodate very wide fluctuations in their environment but the buffering I capacity they endow anally fails, resulting in chronic sub-optimal growth.

The recorded accumulative toxic effects of I I pollution in the morphological, physiological, biochemical and photochemical characteristic are suitable indicators for I I biological monitoring. The pollution load alter, not only the quantity but also the quality of active compounds of the I trees, thereby decreasing the therapeutic value of a compound or a combination of compounds. The maximum effect was observed During winter, confirming that the test species were more sensitive to pollution during winter.