

TU 202

Maximum residues limit of ethylenebisdithiocarbamates in papaya

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This work demonstrates that the endogenous level of CS₂ in papaya fruits is bigger than the dithiocarbamate MRL established in EU and, therefore, its residues determination by measuring the evolved CS₂ is prone of false positive results. Papaya trees treated and untreated with EBDC fungicide supplied samples in which the CS₂ levels were estimated by GC/FPD. From the distribution of the empirical accumulated probability functions of untreated and EBDC treated samples a cut off value was calculated that allowed to classify the results in with or without residues. The quality of this classification function was evaluated through a matrix of error and the 'K-HAT' statistics. The value that best discriminates between endogenous CS₂ and true EBDC residues is 0.36 mg kg⁻¹; bigger values would indicate the use of EBDC.