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Host-Specific Toxin Production by the Tomato Target Leaf Spot Pathogen  
*Corynespora cassiicola*

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**Abstract:** The culture filtrate (CF) of *Corynespora cassiicola*, the causal agent of target leaf spot of tomato, produced visible small, pinpoint, water-soaked lesions on the lower surface of wounded, detached leaves after incubation for 48 h. The extraction, isolation and purification of *C. cassiicola* tomato (CCT) toxin was achieved by anion exchange and gel filtration chromatography. Treatments of the CF with Diaion HP-20 resin and Cosmosil C18-OPN gel were found to be highly effective. The toxin purified partially by cosmosil gel filtration was highly active against the tomato cultivar Momotaro used in the bioassay test, and the fraction eluted with 50% methanol showed toxicity only on the tomato plant. However, in the bioassay of the fractions after Sephadex LH-20 gel filtration no toxicity could be detected. Moreover, methanol fractions (40% and 60%) of the culture filtrate extracted by Sep-Pak cartridge were subjected to high performance liquid chromatography systems. The bioactive fraction (40% methanol) selected for analysis was eluted as double peaks. The results showed that *C. cassiicola* produced a host-specific toxin during colonization of tomato leaves and disease incidence.

**Key Words:** *Corynespora cassiicola*, host-specific toxin (HST), target leaf spot, tomato

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