

S7. LETHAL MUSHROOM TOXINS: ANALYSIS OF THE AMANITINS AND APPLICATION OF LATERAL FLOW IMMUNOASSAY

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Deaths from mushroom poisoning, due to the ingestion of mushrooms containing amatoxins, seem to be increasing both in Turkey and worldwide. The amatoxins found in *Amanita phalloides* (also called the death cap mushroom) are most toxic agents, and they are responsible for more than 95% of the cases of deadly mushroom poisoning. Alpha amanitin is best known toxin of this group. Alpha amanitin analysis can be carried out with special methods such as chromatography and ELISA. ELISA method is suitable in order to analyse urine and blood containing for alpha amanitin. Gas chromatography system is not suitable to analyse for alpha amanitin. HPLC and LC-MS/MS systems are best analytic methods for all materials containing alpha amanitin.

Some analytical machines, supplies and experienced personal are required to perform these analytical methods. There is a need for more simple analytical method. The lateral flow immunoassay method may be an easy solution for this purpose. The lateral flow immunoassays are commonly used worldwide for different purposes such as pregnancy test and drug screening test. This test works based on antigen-antibody complexes that is coupled with visible molecules. These tests are theoretically possible for every analyte whose antibody is producible, and by changing the antibody concentrations, the sensitivity of these tests can be adjusted to the desired thresholds.

Analysis of the amanitins and application of alpha amanitin to lateral flow immunoassay will be declare in this speech.

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