

**Opinion of the Scientific Panel on Food Additives,
Flavourings, Processing Aids and Materials in Contact with Food
on a request from the Commission related to**

**Use of an enzyme preparation based on thrombin:fibrinogen derived from
cattle and/or pigs as a food additive for reconstituting food**

Question number EFSA-2004-025

Adopted on 26 April 2005

SUMMARY

The Scientific Panel on Food Additives, Flavourings, Processing Aids and Materials in Contact with Food has been asked to issue an opinion on the safety in use of an enzyme preparation based on thrombin and fibrinogen derived from cattle and/or pigs as a food additive for reconstituting food.

The enzyme preparation consists of thrombin (EC 3.4.21.5) and fibrinogen, both obtained from blood plasma. The thrombin:fibrinogen preparation is applied to meat where thrombin transforms fibrinogen to fibrin that interacts with collagen enabling the binding of meat pieces in re-constituted meat. It can also be applied on poultry, fish and seafood.

As thrombin and fibrinogen are derived from edible parts of animals, no toxicological tests are required. This thrombin:fibrinogen preparation is produced from plasma obtained from blood of cattle or pigs, hygienically collected in slaughterhouses under veterinary inspection. For many years, several meat products with added animal blood or plasma have been produced and consumed in different countries without adverse effect. The applied concentrations of this thrombin:fibrinogen preparation are in the same range as the concentrations of these proteins in meat products with added blood or plasma. Any remaining thrombin would be partially inactivated by antithrombin III (also present in this thrombin:fibrinogen preparation). In addition any residual thrombin would be further inactivated during cooking (poor stability with heating) and in the stomach after consumption (low pH conditions). Consumption of meat products containing this enzyme preparation are not likely to increase the risk of allergic or intolerance response.

The Scientific Panel on Food Additives, Flavourings, Processing Aids and Materials in Contact with Food concluded that the use of the enzyme preparation based on thrombin:fibrinogen derived from cattle and/or pigs and produced as outlined in the opinion as a food additive for reconstituting food is not of concern from the safety point of view.