Table 1

A chronological summary of class I and II pet food recalls involving chemical adulteration in the USA between 1996 and 2008.

Year of recall	Product recalled	Reason for recall	Adverse health effects reported	Recall classification
1998	Doane Products Co., Inc. Dry dog food	Aflatoxin contaminated corn	Death of at least 25 dogs	I
1999–2000	Golden Sun Feeds, Inc. Dry dog food	Excess vitamin D_3	At least 7 dead and 3 illnesses in dogs	I
2001	The IAMS Company Dry dog food	Excess methionine	Illness in 21 dogs	n/a
2005-2006	Diamond dog and cat foods	Aflatoxin contamination	At least 100 pets affected	n/a
2006	Royal Canin Veterinary Diet	Excess vitamin D_3	Illness in 6 dogs and 5 cats	II
2007	> 100 brand names of dog and cat food manufactured by Menu Foods	Contaminated with the industrial chemicals melamine and cyanuric acid	At least 424 dogs and cats affected [4]	I

n/a, not available

Aflatoxin-Associated Recalls

Aflatoxins are natural mycotoxins produced both in the field and in storage by many species of fungi. Aflatoxins include B_1, B_2, G_1, and G_2 with B_1 being the most toxic. In October and November of 1998, a recall was initiated for 1,362,516 bags of 54 pet food brands and treats made by Doane Products Co., Inc. due to aflatoxin contamination [8]. The aflatoxin contamination of the pet food was attributed to a contaminated batch of corn which was not appropriately tested. The corn had been examined with a black light prior to processing. Black light only detects kojic acid, a common metabolite of toxic fungi, and does not detect aflatoxins in food. Retrospective testing with aflatoxin-specific procedures revealed that four loads of corn used in the manufacture of the recalled food contained aflatoxin in concentrations ranging from 66.4 to 495.3 ppb. Dog food consumed by ill or deceased dogs contained aflatoxin concentrations in the range of 35–191 ppb. According to the FDA HHE report, at least 25 dog deaths resulted from consumption of the contaminated product [8].