Kettle descalers: a brewing issue.

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Objective
Household products used to remove limescale from domestic kettles contain strong acids (e.g. formic, phosphoric and hydrochloric acids) and are present as gels, liquids or tablets. Accidental exposure may occur when a kettle is descaled and subsequently the contaminated water is used to prepare food or beverages (including infant feeds). We wished to see whether enquires concerning these products were increasing.

Method
A retrospective review of telephone enquiries to UK National Poisons Information Service (NPIS) from 1st January 2009 to 31st December 2013 concerning accidental ingestion of kettle descalers. Total accesses to TOXBASE\textsuperscript{®} (the clinical toxicology database of the National Poisons Information Service) for the same period were also examined.

Results
The NPIS received a total of 1324 enquiries relating to 1360 accidental ingestions of kettle descalers during the five year period. Most of these exposures (\textit{n}=881, 65\%) concerned adult patients who had used the water to prepare hot beverages or cook foods such as vegetables, pasta, rice and noodles. Two hundred and thirty exposures (17\%) involved infants under the age of two years who had been given a contaminated bottle feed. Of 1360 exposures, 361 (26.5\%) reported symptoms. Amongst these patients the most frequently reported symptoms were buccal irritation (\textit{n}=108), abdominal pain (\textit{n}=84), vomiting (\textit{n}=45) and nausea (\textit{n}=42). Over the study period the number of enquiries regarding exposure has increased from 227 in 2009 (0.4\% of the total number of enquiries received by NPIS) to 327 in 2013 (0.6\% of the total NPIS enquiries). During the same period there was an increase in the total number of accesses to information about kettle descalers on TOXBASE\textsuperscript{®} from 889 in 2009 to 1166 in 2013, although these accesses may involve either deliberate exposure or enquiries for general information only.

Discussion
The number of telephone enquiries to the UK NPIS regarding accidental exposure to household kettle descalers is increasing. Ingestion is associated with toxicity among all ages, including babies. These exposures might be avoided by addition of a non toxic visual deterrent which would alert the user that the kettle water was still contaminated with descaler.