



A box of toys is a breeding ground for germs and bacteria. Are you harming your customers' children?

Whilst it is very important to provide a child friendly retail environment, retailers who provide a box of toys for children to play with may be inadvertently creating a serious health risk for those children.

The attached report details the results of independent testing carried out by AMS Laboratories on four toys taken from a doctor's waiting room.

The report shows that several types of toxic germs were found on the toys including:

Staphylococcus – specifically *S.aureus* which can cause skin infections and carry enteric toxins. One type of *S.aureus* that was found is resistant to antibiotics. Of the four toys, three of them were found to have staphylococci present.

Coliform bacteria – an indicator of potential faecal contamination. In the study there were coliforms found which were believed to represent poor hygiene on the part of those individuals that had handled the toys prior to testing.

In conclusion, the report states that:

"The results obtained indicate that organisms associated with handling and oral contact, including potential pathogens, were found on the toys. The presence of these organisms on the toys furthermore indicates that other pathogens that could cause harm to a child might also be present."

Child Friendly Solutions' Play Panels help eliminate the risk of infection to children because they are easy to keep clean on a daily basis. When wiped over once daily with our anti-bacterial cleaning solution, the risk of cross-infection is reduced for up to 12 hours.

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Ms Anne Doyle
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26/11/2004

Dear Ms Doyle,

Re: Interpretation of Microbiological Examination of Children's Toys,
AMSL Certificate of Analysis # 0407507/1-4, dated 14/9/2004.

This letter has been prepared to assist in the interpretation of the results found and reported in the C. of A. mentioned above.

Four children's toys were received at the laboratory on 7/9/04, individually bagged in re-sealable food-grade polythene bags. These were individually swabbed and examined for a number of microorganism types. The microorganisms chosen were selected to give an indication of potential harm to children when playing with similar types of toys. Thus, besides measuring the total bacterial load on the toys, we checked for members of the *Staphylococcus* species which includes the notorious "golden staph" or "MRSA" besides others which can cause problems in compromised individuals. We also checked for the presence of coliform group organisms which includes *Escherichia coli* (commonly referred to as "*E.coli*") as well as others that can cause problems in compromised individuals.

The results are expressed in "colony forming units" which is an accepted microbiological way of enumerating bacterial numbers. It approximates the number of bacteria present in a sample, or in this case the number present in the swab taken directly from the toy.

There were different quantities of total bacteria present on each of the toys. These differences were partially explained by the complexity and/or size of the toy, such as the tractor activity centre and the elephant activity centre, where there were several parts to be handled and most, if not all, of these parts were swabbed. However, it was surprising that the Buzz Lightyear Ball had such a high count since it was small, and relatively smooth surfaced. However, it was soft-centred and therefore squeezable. This may have made it attractive to handle and place in the mouth.

Staphylococcus species of organisms are common inhabitants of the skin and are an indication of handling. Amongst the numerous species of these organisms, some are more

pathogenic, such as *S.aureus* which can cause skin infections and carry enteric toxins. Recently there have also been reports of community acquired MRSA, which is an antibiotic resistant form of *S.aureus*. Therefore it is considered to be an objectionable organism to be present on publicly available toys. In this study we found staphylococci present on all toys and *S.aureus* on three of them. The highest numbers of staphylococci and, indeed, *S.aureus* were found on the Buzz Lightyear Ball toy.

Coliform bacteria are often found in the gut of warm blooded animals and are therefore used as an indicator of potential faecal contamination. One member of the coliform group of organisms in particular, namely *E.coli*, is used worldwide as an indicator of such pollution in drinking water. In the present study there were no *E.coli* found. However, there were coliforms found which were believed to represent poor hygiene on the part of those individuals that had handled the toys prior to testing.

There are no Australian or international standards that specify acceptable numbers of organisms that can be present on the surface of used toys. It is fair to say that it would be expected that no pathogens should be present. In the absence of testing for a large number and variety of pathogens, other organisms that are potential pathogens or used in other industries to measure microbial quality (often referred to as “indicator” organisms) are a suitable alternative. These were used in the present study.

In conclusion, the results obtained indicate that organisms associated with handling and oral contact, including potential pathogens, were found on the toys. The presence of these organisms on the toys furthermore indicates that other pathogens that could cause harm to a child might also be present. Measures should therefore be taken to sanitise such toys between users to reduce the risk of infection from playing with them, particularly for age groups that may place the toys in their mouths.

Yours sincerely,

Paul Priscott, PhD
Director