

2024 New Zealand Total Diet Study (NZTDS) Submission form

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About the WasteMINZ Residential Lead Working group

The WasteMINZ Residential Lead Working Group formed in 2018 and includes representatives from the health and public health sectors, lead awareness advocates, and the water, paint retail and trade industries (Appendix 1).

The group is concerned with the undetermined magnitude of health effects from multiple residential (non-occupational) sources of lead. Our purpose is to bring together people to identify and address gaps in knowledge and practice for the benefit of all New Zealanders.

The group has therefore considered the 2024 New Zealand Total Diet Study consultation and would like to submit the following responses to the consultation questions.

Consultation questions

Q1. Do you consider that the current list of priority chemicals is sufficient? If not, please indicate which chemicals should be substituted and provide relevant data and/ or justification to support these recommended changes.

The WasteMINZ Residential Lead Working Group is supportive of lead being retained on the current list of priority chemicals/metals. The group is also supportive of lead being included in this, and future, Total Diet Surveys.

Q2. Do you consider there are any foods that should be included or excluded based on the dietary consumption patterns of infants and toddlers? If so, please provide data to identify and justify any recommended changes.

We consider that testing cocoa powder should be included (specifically for lead testing) and while we note that baby food is included, we would also like to see testing of cinnamon, which has shown to be contaminated internationally. Both are used in food preparation and seasoning. We also recommend table salt be analysed for lead as well as iodine.

The group is also aware that a significant proportion of childhood lead absorption cases have been caused by (and in some cases isotopically linked to) high lead levels in commonly consumed herbs and spices (turmeric, basil, ginger, thyme, curry powder, and ginger root supplements), and ayurvedic medicines, among children of some ethnic groups. Although alternative therapeutic

products will be outside the scope of the NZTDS, we urge consideration of ethnic differences in herb and spice consumption for lead intakes in particular, and how these could be modelled and accommodated in the upcoming NZTDS, building on previous targeted survey work such as MPI Technical Paper No: 2012/26 Chemical Contaminants in Imported Dried Spices.

It would be ideal to include either several examples, or representative composites, of high-use herbs and spices and/or dishes containing these, to allow for cases where they may comprise a significant or routine part of diets of toddlers of specific ethnic groups. Some tailoring of dietary assumptions would need to be made when modelling contaminant intakes in these modelled cases. Alternatively, concentration results could be provided as a separate information table.

Additionally, while wheat flour is a proposed new addition, we recommend including gluten-free flours to be tested as well. Some typical ingredients of these flours like tapioca and cassava have been found to have high lead levels. While these are likely to be used in home baking, it's important to note that they may have high consumption among breastfeeding mothers of babies with dietary intolerances.

Lastly, wild game can be very high in lead when lead ammunition is used which is still common to our understanding. We recommend investigating this potential dietary lead source since it could be significant for babies, toddlers and breastfeeding mothers. Our group is aware of research undertaken in the Nelson area which could be of use to this study.

As lead readily transfers into breastmilk, dark and milk chocolate could be a significant source of infant exposure too.

Q3. Do you consider there are any specific population groups (within the six month to four year old age group) that should be included in the 2024 NZTDS based on significant differences in dietary intake patterns? If so, please provide data to identify and justify any recommended changes.

The WasteMINZ Residential Lead Working Group supports the focus on young children as we agree that for lead exposure, they are the most vulnerable group of the population. However, the group is disappointed that older children and adult groupings included in previous surveys are not proposed for this survey. We urge the Ministry of Primary Industries (MPI) to include these population groups in addition to the young child groups because excluding these groups will create information gaps and cause population dietary issues to be missed.

The most desirable approach (budget allowing) would be to sample and test the same range of foods as tested in the last NZTDS, but also add in the new foods for infants and toddlers as proposed in the discussion paper. This would allow retrospective estimation of the 2024 intakes of older children and adults, once suitable nutrition data becomes available. The time between subsequent New Zealand Total Diet Studies - which historically were nominally every 5 years - have been allowed to become too long. Given that the last NZTDS was in 2016, failure to accommodate any option for at least estimating contaminant intakes of older children, adolescents and adults in 2024 is not considered acceptable. On the basis of MPI's more recent track-record, the next opportunity may not arise until 2032 or beyond. This is far too long.

One aspect of the proposal that seems to be overlooked is the diets of breastfeeding mothers, whose milk may be the primary source of nutrition for a vast population of infants less than 6 months as well as 6-12 months. Lead readily transfers into breastmilk and could be a significant source of infant exposure. So, while babies don't consume chocolate or alcoholic beverages, their mothers do. Along

this rationale, dark chocolate could be significant addition to a mother's lead burden and should be included in the study along with milk chocolate.

Q4. Do you have any comments regarding any other aspect of the consultation paper?

Other than the loss of the older groupings, the main concern of the WasteMINZ Residential Lead Working Group is that the national nutrition survey is required for Tolerable Daily Intake (TDI) to be calculated across all age groups, and the last national Adult Nutrition Survey (run by the Ministry of Health) was in 2009.

Consequently, MPI needs to rely on 'first foods' (FF) and 'young foods' (YF) nutrition survey data developed from 2021 by the academic nutrition group of a third-party tertiary institution (the University of Otago). We wish to acknowledge MPI's initiative - and understand the situation that a lack of current information poses. However, to plug the gaps with externally sourced nutrition data, and change the entire design of the NZTDS to only consider infants and toddlers, is not acceptable. The inaction by the Ministry of Health (MoH) to provide the necessary information needs to be addressed to ensure the NZTDS is representative.

MoH itself notes: "The Ministry of Health runs national nutrition surveys for adults and children, to collect information on the food and nutrient intake of New Zealanders. Nutrition is a vitally important part of people's lifestyle, and can affect our health." We are concerned that the ministry, which claims this role, has been unable to deliver in this area for over 14 years.

This group relies heavily on the TDIs in order to calculate appropriate Soil Guideline Values and so the absence of timely and comprehensive national nutrition survey data is significant to our industry. We urge MPI to escalate our concerns and advocate for routine future coordination across the two ministries in this critical space.

Full national nutrition surveying needs to resume as soon as possible, and we wish to see MoH and MPI coordinate the timing of these surveys so that each NZTDS can rely on current nutrition data across the full age range.

Conclusion

The WasteMINZ Residential Lead Working Group would like to thank MPI for the opportunity to provide a submission.



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Appendix 1 – List of Working group members and organisations

Working group member	Organisation
Ananda Card	Lead Aware NZ
Andrew Rumsby	EHS Support
Annaka Davis	Toi Te Ora Public Health National Public Health Service
Belinda Cridge	Water New Zealand
Ben Keet	Geo & Hydro - K8 Limited
Dave Bull	HAIL Environmental
Greg Percival	Resene
Gareth Oddy	Davis Ogilvie & Partners
Isobel Stout	PDP
Jo Cavanagh	Manaaki Whenua Landcare Research
Michelle Begbie (Chair)	Waikato Regional Council
Nick Kim	Massey University