



BC Centre for Disease Control
An agency of the Provincial Health Services Authority

Environmental Health Services

Food Issue

Notes from the Field

Re-useable take-out containers

Request received from:	Regional Health Authority
Date of request:	July 17, 2013
Issue (brief description):	Use of Tiffin containers in FSE's – are there any recommendations or issues with use of these products?

Disclaimer: The information provided in this document is based on the judgement of BCCDC's Environmental Health Services Food Safety Specialists and represents our knowledge at the time of the request. It has not been peer-reviewed and is not comprehensive.

Summary of search information

1. Internet sources
2. Ovid – Food, Nutrition, Health database and FSTA abstracts. Key words “take-out” or “take-away”

Background information

Restaurants are seeking permission from regional health authorities to allow the use of re-useable stainless steel containers (Tiffin containers) for consumers to purchase take-away (or take-out) foods.

The company is also sponsoring a project whereby costs of purchasing the container go towards assisting restaurants to purchase locally grown produce, called the tiffin project (see photo and <http://thetiffinproject.com/>)



What information and best practices currently exist for use of take-away and re-useable take-away containers?

A survey of consumers about take-away packaging was conducted in the U.S. in 2008. In this survey they assess what consumers wanted in take-away containers along with food safety behaviours associated with take-away foods.¹ Consumers primarily wanted leak-proof containers that kept food hot, and when surveyed these consumers demonstrated good food safety knowledge regarding temperature control and storage. Although the majority of consumers felt restaurants should provide food safety messaging about temperature control and storage, the experience of most consumers was that this information was not included with take-out food purchases.¹

What are the risks associated with take-out foods?

Take-out foods are gaining popularity, with some groups purchasing take-out foods an average of 4X per week.² Nutritional quality of these foods is also a growing concern; evidence demonstrates take-away foods are often higher in fats and total carbohydrates contributing to rising obesity levels and poor cardiovascular health.^{3,4} Historically, take-away foods have been associated with foodborne illnesses related to poor temperature controls (*Bacillus cereus*, *Clostridium perfringens*, *Staphylococcus aureus*), as well food preparation problems in foods like donairs, shawarmas (*E. coli* O157), baked goods (*Salmonella*) and a variety of foods.⁵⁻⁷

Previous guidance on re-useable containers from British Columbia

Of interest in BC a response to this question has been issued by Mr. Tim Lambert of the Ministry of Health – the contents of the letter he wrote have been posted on several blog sites - see Appendix 1. Essentially, Mr. Lambert writes there is no provision in the *Food Premises Regulation* that specifically prohibits this activity, however, each operation may interpret the regulation that this activity should not occur as the control for protecting food from contamination, and ensuring food is dispensed in a sanitary manner is not entirely within the operator control (section 12).⁸

Although take-away containers are not specifically addressed in the BCCDC guidelines, *Food Protection – vital to your business*, an example for barbequed chicken being sold in sealed foil pouches is given. The instruction recommends that operators tell customers to take the chicken home right away and to provide instructions for home use, specifically temperature control instructions for hot-holding and re-heating.⁹

Guidance on re-useable containers from Australia and the US

In other jurisdictions, such as Australia, re-useable containers provided by the public are allowed. Guidelines are issued to restaurants to concerning take-away foods (doggy bags). These guidelines are summarized on the following page.

(<http://www.commerce.wa.gov.au/sites/default/files/atoms/files/takinghomeleftoversrestaurants.pdf>)

The US FDA Food Code **does not**, however, permit this activity.¹⁰

3-304.17 Refilling Returnables.

1. (A) A take-home FOOD container returned to a FOOD ESTABLISHMENT **may not be refilled** at a FOOD ESTABLISHMENT with a POTENTIALLY HAZARDOUS FOOD (TIME/TEMPERATURE CONTROL FOR SAFETY FOOD).
2. (B) Except as specified in ¶ (C), a take-home FOOD container refilled with FOOD that is not POTENTIALLY HAZARDOUS (TIME/TEMPERATURE CONTROL FOR SAFETY FOOD) shall be cleaned as specified under ¶ 4-603.17(B).
3. (C) *Personal take-out BEVERAGE containers, such as thermally insulated bottles, nonspill coffee cups, and promotional BEVERAGE glasses, may be refilled by EMPLOYEES or the CONSUMER if refilling is a contamination-free process as specified under ¶¶ 4-204.13(A), (B), and (D).*

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Guidelines for restaurants and food outlets from Australia

- Determine a policy for providing leftover food to consumers.
- Have a set procedure for dealing with customer requests to take leftover food home.
- Properly instruct your staff on your policy and procedure and remind them that health legislation issues are not to be used as an explanation for not providing doggy bags.
- Transfer food into a new, unused food-grade container, or a container supplied by the customer.
- Write the date and time of food preparation on the container.
 - If possible, provide an instruction sticker or leaflet (see sample below) with leftover food taken away from the restaurant. This should outline reheating and storage instructions and explain any associated risks.

Example sticker or leaflet from Australian guidelines

(temperatures adjusted to BC standards)

It is your responsibility to store and handle this food safely. You should do the following:

- Refrigerate food below 4°C as soon as possible.
- Separate raw and cooked food.
- Discard food not refrigerated within two hours of preparation.
- Discard food that is more than 24 hours old.
- Reheat refrigerated food to steaming hot (above 74°C) for at least two minutes before consuming.

Use of Tiffin Containers

According to the Tiffin container web-site, foods kept in the containers will stay hot or cold for about an hour. Insulated Tiffin containers do exist as well, which may prolong this time slightly. A recent study by a BCIT EHO demonstrated that thermal insulated containers can keep hot foods, such as macaroni and cheese above 60°C for close to 3 hours (range 2.5-2.9 hrs)¹¹.

<http://www.happytiffin.com/pages/tiffin-guide-and-faq.html#temp>

As these containers do not keep foods hot or cold for longer than one hour (the actual time is unknown), and as foodborne illnesses associated with take-away foods are known to occur from temperature abuse of foods, this remains a concern. As previously mentioned, take-away foods can be linked to poor health, however, nutritious and healthy take-away foods have also been demonstrated to improve overall health.¹² The use of “green” containers will also improve environmental health by reducing wastes from packaging that go to the landfill.

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Recommendations from BCCDC

A recent study assessed the willingness of restaurant management to use food labels on take-out containers to improve safety behaviours of customers. In this study they found the management see the use of food stickers as a competitive advantage by demonstrating their commitment to providing safe foods to their customers.¹³

Based on the background information and growing desire for consumers to have the option for re-useable containers for take-away foods, including leftovers from meals served in restaurants, the BCCDC offers these recommendations:

1. Allow use of re-useable containers with the following provisions:
 - a. Containers provided by customers must be visually clean and free from debris,
 - b. FSE's will retain the right to not serve food in re-useable containers should they not choose to participate, or should they feel the container provided will compromise their ability to serve food in a hygienic and sanitary manner (for e.g., if the container is dirty),
 - c. FSE's may wash re-useable containers before serving food in them, but should not be obligated to provide this service to the customer,
 - d. FSE's should provide safe food handling instructions, ideally by placing a sticker onto the container, or by providing a sticker or hand-out with these instructions to the consumer. This information should include that the Tiffin container will maintain temperatures for 1 hr or less, and that temperature control should be implemented if the food is not eaten immediately. Hot-holding, refrigerated holding and re-heating temperature control information is recommended.
2. BCCDC will offer this topic as a potential BCIT ENVH student project for consideration.

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References

1. Binkley M, Broz CC, Boyce J, et al. Consumer perception of take-out food: safe handling practices and desired package attributes: Ohio State University and Texas Tech University; 2008. Available from: <http://fsmec.org/wp-content/uploads/2011/09/BinkleyBrozBoyceKim2008.pdf>.
2. Seung Hee L, Hoffman VA, Bleich SN, et al. Frequency of visiting and food dollars spent at carryouts among low-income, urban African American adults. *Journal of Hunger & Environmental Nutrition*. 2013;7(4):459-67.
3. Jaworowska A, Blackham T, Davies IG, et al. Nutritional challenges and health implications of takeaway and fast food. *Nutrition Reviews*. 2013;71(5):310-8.
4. Smith KJ, Blizzard L, McNaughton SA, et al. Takeaway food consumption and cardio-metabolic risk factors in young adults. *European Journal of Clinical Nutrition*. 2012;66(5):577-84.
5. Christian JHB. Take-away foods - microbiological aspects. *CSIRO Food Research Quarterly*. 1980;40(2):25-8.
6. Farooq A, Saqlain A, Ali-Butt Z, et al. Bacterial contamination in processed chicken shawarma (meat) sold in various parts of Lahore, Pakistan. *Pakistan Journal of Nutrition*. 2013;12(2):130-4.
7. Sheard JB. Food poisoning in England and Wales during 1983. A new title but still the same problems. *Environmental Health*. 1986;94(3):57-62.
8. Government of British Columbia. Food Premises Regulation. Victoria, B.C.: Queen's Printer; 1999; Available from: http://www.bclaws.ca/EPLibraries/bclaws_new/document/ID/freeside/11_210_99.
9. B.C. Centre for Disease Control. Food protection: vital to your business. Food Protection Services, BCCDC,; 2010; Available from: http://www.bccdc.ca/NR/rdonlyres/29845061-1E80-4768-B278-A245E70368BE/0/FoodProtectionVitaltoBusiness_Mar2010.pdf.
10. U.S. Food and Drug Administration. FDA Food Code 2009. 2009; Available from: <http://www.fda.gov/Food/GuidanceRegulation/RetailFoodProtection/FoodCode/ucm186451.htm>.
11. Chu T. The hot lunch dilemma: evaluating heat retention ability of insulated container with macaroni and cheese: B.C.I.T.; 2013.
12. Lassen AD, Ernst L, Poulsen S, et al. Effectiveness of a Canteen Take Away concept in promoting healthy eating patterns among employees. *Public Health Nutrition*. 2012;15(3):452-8.
13. Surgeon BV, Maclaurin T, Powell DA. Assessing management perspectives of a safe food-handling label for casual dining take-out food. *Food Protection Trends*. 2009;29(10):620-5.

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Appendix 1 – Response from Mr. Tim Lambert, BC Ministry of Health

Clean Bin Project: <http://cleanbinproject.com/category/reusable-containers/>

NOVEMBER 5, 2010 · 8:53 AM

Are Reusable Containers Unsanitary?



People often ask me if I ever get shot down trying to use my own containers in grocery stores. Generally, the answer is ‘no’, but that’s mostly because I choose to shop where it isn’t an issue. However, just over a year ago, I had a run in at a popular organic food chain that refused to fill my container citing “health reasons”. They weren’t clear on what legislation governed this, but they were pretty sure that there were “health reasons”.

So that got me wondering if there really *was* a law that said you can’t use reusable containers at the grocery store or in a restaurant. Long story short, I wrote a letter and got bounced around the government a bit before connecting with Tim Lambert at the Ministry of Healthy Living and Sport who, apparently, is responsible for food safety here in BC.

Turns out that using a reusable container is not actually illegal, or even in the ‘not recommended’ category. . .but it *is* up to the discretion of the store.

I’m hoping that by sharing Mr. Lambert’s response, we will all be a little better equipped for friendly negotiation next time we get confronted about reusable containers. (Failing that, I think we should all make official looking ID cards that say “this person has been approved to use their own container and takes full responsibility for any health issues stemming from such use” and practice flashing them at the deli counter.)

“ . . . There is no provision within the Food Premises Regulation that specifically prohibits the use of reusable containers. Section 12 mandates that an operator must (a) protect food from contamination; and, (b) store, handle, prepare, display, and dispense food in a sanitary manner. Some food premises may allow or even encourage the use of reusable containers for environmental benefits or cost-saving potential. However, some may interpret the regulation in such a way that reusable containers prevent operators from keeping food and the premise sanitary. Some opportunity for cross contamination exists, such as with grocery store delis that place containers on weighing scales or restaurants bringing containers into the kitchen area, which is probably why some food premises may interpret the regulation to prohibit this type of activity.

I agree that reducing packaging is an important environmental concern and encourage the use of reusable items where their use does not create public health concerns. Although a food premises’ policy will be informed by their interpretation of the legislation, I would encourage you to speak with the operators of the food premises you frequent and try to reach a solution. You may wish to share a copy of this email with them.

I appreciate the opportunity to respond to your concerns.

Yours truly,

Tim Lambert
Executive Director, Health Protection”

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