



UBC School of Occupational and Environmental Hygiene

## Bioaerosols, Airborne Particulate Matter and Symptoms in BC Liquor Distribution Branch Stores

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### Appendix 3 - Definitions used

## Appendix 3: Definitions of variables used in analyses

### Definitions arising from symptom questionnaires:

	Symptom 'name'	detailed description
<b>Symptoms</b>		
1	Usual cough	positive response to the question: do you usually have a cough (not including 'clearing your throat')?
2	Usual phlegm	positive response to the question: do you usually bring up phlegm from your chest (not from your nose)?
3	Wheeze occasionally, apart from colds	positive response to the question: Does your chest ever sound wheezy or whistling, occasionally apart from colds?
4	Wheezing with breathlessness	Positive response to Q 3 above, plus positive response to: Is the wheeze associated with chest tightness or difficulty breathing?
5	Chest tightness episodes	Positive response to the question: Do you ever have episodes or attacks of chest tightness?
6	Shortness of breath hurrying on the level	Positive response to the question: Are you troubled by shortness of breath when hurrying on the level or walking up a slight hill?
7	Shortness of breath walking on the level	Positive response to Q 6 above, plus: positive response to: Do you have to walk slower than people of your own age, on the level, because of breathlessness?
8	Sneezing, itching, running nose	Positive response to the question: Do you ever have sneezing, or an itchy, runny nose when you do not have a cold?
9	Eye symptoms	Positive response to the question: Do you usually have burning, itching, watering eyes?
10	Work-related _____ (each of the above)	Positive response to the symptom Q, plus: age symptom first appeared greater than age first started with current employer; and one or both of: symptom is aggravated by environmental agents at work symptom improves on weekends or long holidays
11	Acute symptoms (see list in report for specific symptoms)	Positive response to the question: in the past week have you experienced (symptom name), plus - when asked 'how often?' - responds more than once, and - when asked 'how much did it bother you?', responds 'some' or 'very much'
13	nose / throat irritation	two or more of the following acute symptoms (as defined in Q 11 above): irritated nose, throat, voice, or taste disturbances
14	chest symptoms	two or more of the following acute symptoms (as defined in Q 11 above): dry cough, chest tightness, wheezing, breathlessness
15	somatic symptoms	two or more of the following acute symptoms (as defined in Q 11 above): fever, headache, dizziness, tiredness, nausea

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**Demographics and health history**

16	Current smoker	Smoked more than 20 packs of cigarettes ever, or more than 1 cigarette / day for one year (as of 1 month ago)
17	Former smoker	As for Q 13 above, but stopped smoking greater than 1 month prior to interview
18	Non smoker	Smoked less than 20 packs of cigarettes ever, or less than 1 cigarette / day for one year (over entire lifetime)
19	Childhood asthma	Positive response to: have you ever had asthma? and, was it diagnosed by a physician? and, reports age of onset less than 16
20	Childhood hayfever	Positive response to: have you ever had hayfever? and, was it confirmed by a physician? and, reports age of onset less than 16
21	Childhood eczema	Positive response to: have you ever had eczema (or scaly, itchy rash in the flexures of the body)? and, was it confirmed by a physician? and, reports age of onset less than 16
22	History of heart disease	Positive response to: Have you had treatment for heart trouble in the past 10 years?

## **Karasek\* Job Demand Control Questionnaire Instrument**

This is a 12 item questionnaire (top page 17, main questionnaire) that allows for determinants of psychosocial aspects of work.

- Questions A-F enquire about task-level control
- G-I enquire about psychological demand
- J enquires about physical demand
- K-L enquires about co-worker social support
- M enquires about level of noise perceived on the job.

Combining scores (based on a predefined algorithm) from these questions allows for grouping of individual jobs into specific categories

*Active Jobs* are those with high task control and high psychological demand

*Low Strain Jobs* are those with high task control and low psychological demand

*High Strain Jobs* are those with low task control and high psychological demand

*Passive Jobs* are those with low task control and low psychological demand

Job strain: psychological demand score / task control score

Workplace environment score: average response to each of 4 workplace scales

job satisfaction

employee/employer relations

employee participation in decision making

Joint H&S committee relations

\* Karasek R, Brisson C, Kawakami N, Houtman I, Bongers P, Amick B. (1998). The Job Content Questionnaire (JCQ): an instrument for internationally comparative assessments of psychosocial job characteristics. *J Occup Health Psychology*. 3:322-55.

## Descriptions of store environment factors:

	Factor	type	description
Ambient conditions (measured)	outdoor temperature	continuous	degrees C (range: -8 to 25)
	indoor temperature	continuous	degrees C (range: 13 to 26.5)
	indoor relative humidity	continuous	% (range: 36 to 74%)
	water content of indoor air	continuous	lb water /lb air (range: 0.0046 to 0.0105)
	median family income (in same postal code) - Statistics Canada data	continuous	based on 1996 census data range: \$27,450 to 63,113
Store cleanliness factors (as reported by store mgt)	days since floors were last washed	continuous	range: 0 to 13
	glass breaker steam cleaned in past month	2 categories	yes / no or not known
Store layout factors (field staff observation)	extent of crowding (visual inspection)	4 categories	very crowded / crowded / somewhat crowded / wide open
	location of breaker relative to empties counter	3 categories	adjacent separated by a wall or partial wall separated by distance
	warehouse size (subjective assess.)	3 categories	relatively small/ medium / large
	store located below grade	2 categories	yes / no
	store located in enclosed mall	2 categories	yes / no
Empties recycling volume factors	outdoor empties kiosk	2 categories	yes / no
	number of glass bins filled on test day (observation)	continuous	range: 0.25 to 3.75
	number of can bins filled on test day	continuous	range: 0.33 to 5
	number of bin changes on test day	continuous	range: 0 to 2
	beer bottle returns in prior month	continuous	range: 1849 to 31,304 dozen
Activities associated with glass breaking (field staff observation)	wine and spirits bottle returns in prior month (data from LDB mgt)	continuous	range: 3640 to 68,961
	number of times bin raked on test day	continuous	range: 0 to 7 times
	number of times jams were cleared	continuous	range: 0 to 3 times
	spray cleaner used on breaker	2 categories	yes / no
	glass bins covered	2 categories	yes / no
	full bins in store, previous night	2 categories	yes / no
	visually contaminated bottles in glass breaking machine or broken manually	2 categories	yes / no
Machine factors (field staff observation)	type of glass breaking machine	4 categories	glass aggregate rotary, single feed rotary, conveyor feed rotary conveyor, hydraulic
	use of local exhaust system	3 categories	never or seldom used used when operating glass breaker always on
Employee tasks (self-report)	% of employee time spent, test day:		
	stocking shelves	continuous	range 0 to 100%
	working on loads / orders	continuous	range 0 to 100%
	working at the empties counter or operating the glass breaker	continuous	range 0 to 100%
	working at the cash station	continuous	range 0 to 100%
	working in an office, elsewhere in the front of the store	continuous	range 0 to 100%