

# codex alimentarius commission



FOOD AND AGRICULTURE  
ORGANIZATION  
OF THE UNITED NATIONS

WORLD  
HEALTH  
ORGANIZATION



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Agenda Item 15 B

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## JOINT FAO/WHO FOOD STANDARDS PROGRAMME

### CODEX COMMITTEE ON FOOD ADDITIVES AND CONTAMINANTS

#### Thirty-fifth Session

Arusha, United Republic of Tanzania, 17 - 21 March 2003

### COMMENTS SUBMITTED ON THE DRAFT MAXIMUM LEVEL FOR PATULIN IN APPLE JUICE AND APPLE JUICE INGREDIENTS IN OTHER BEVERAGES IN RESPONSE TO CL 2002/10-FAC

The following comments have been received from Denmark, Canada :

#### **DENMARK:**

In the circular letter governments have been invited to supply more data in connection with the possible reduction of the maximum level of 50 µg/kg for patulin in apple juice and apple juice ingredients in other beverages.

Danish investigations on content of patulin in apple juice has given the following result:

Product	No of samples	Range	Average	Median	Year
Apple juice	46	< dl – 27 µg/l	5.1 µg/l	4,1 µg/l	1985
Applejuice	57	<dl –18 µg/l	4.9 µg/l	-	1994

These data shows that it is possible to produce apple juice with a content below 25 µg/kg and that this limit only rarely will be exceeded. Therefore, Denmark supports a limit of 25 µg/kg and cannot support a limit of 50 µg/kg.

## CANADA:

In response to Circular Letter **2002/10-FAC (April 2002)**, Canada is pleased to offer the following comments on Item 8, Part C:

Canada has previously provided comments concerning toxicology, exposure and risk assessment information in connection with the Discussion Paper on Patulin. Canada continues to support adherence to good manufacturing practices which suggest that rotted or mouldy fruit not be used in order to minimise the formation of patulin.

With respect to the ML for patulin, Canada presently uses an ML of 50 µg/kg as an unofficial guideline and supports continuance of this tolerance for several reasons.

First, in light of the relatively recent establishment of the current ML, it is considered that a reduction in this value is premature. Companies that have adjusted their technology and practices in order to meet this standard often achieve a much greater reduction in patulin than is necessary to meet the ML of 50 µg/kg. Canada recommends that CCFAC monitor the effect that the current ML is having on patulin levels in apple produce of Member States for a period of time before a determination is made of whether to revisit the ML or not.

Second, the detection limits that are routinely attainable for analytical methods that measure patulin are not sufficiently low to allow the enforcement of the proposed ML of 25 µg/kg. For instance, a 1998/99 survey of samples taken in the Ontario region of Canada utilised a method based on an AOAC method (995:10). The detection limit was 20 ppb, which may be prohibitively high for enforcement of a 25 µg/kg ML. Of interest is the fact that, for the Ontario samples, all 89 apple juices and drinks were <50 µg/kg (see table below). One apple juice sample contained 31 µg/kg and another sample contained 34 µg/kg.

Third, Canada considers that a reduction in the patulin ML could impose unnecessary economic hardship for some countries without having a significant impact on the reduction of health effects.

With respect to the levels of patulin found in apple juice sampled in Canada, the following table summarises survey results for a three-year period beginning 1996/97 to 1998/99.

<b>Commodity</b>	<b>N</b>	<b>Mean, µg/kg</b>	<b>Range, µg/kg</b>	<b>no. &lt; LD</b>	<b>No. &gt; 50 µg/kg</b>
<i>1998/1999 Survey Year</i>					
Apple Juice (pure, concentrate, or reconstituted)	85	<20	<20 - 34	83	nil
Apple Cider	3	<20	all <20	3	nil
Apple Beverage	1	<20	all <20	1	nil
<i>1997/1998 Survey Year</i>					
Apple Juice	11	<22.9	<20 - 37	9	nil
Apple Juice Concentrate	2	<20	all <20	2	nil
Apple Juice Reconstituted	23	<34.7	<20 - 183	18	3
<i>1996/1997 Survey Year</i>					
Apple Juice	36	<23.4	<5 - 96	24	2
Apple Juice Unsweetened	99	<13.3	<5 - 107	72	3
Apple Juice Reconstituted	20	<17.6	<5 - 43	14	nil