

Summary of Public Comments Received on the Government of Canada's Draft Screening Assessment Report on 1,2-Benzenediol (catechol) (CAS RN 120-80-9)

Comments on the draft screening assessment report on 1,2-benzenediol (catechol), a substance included in Batch 1 of substances to be addressed as part of the Chemicals Management Plan Challenge under the Canadian Environmental Protection Act 1999 (CEPA 1999), were provided by the Canadian Environmental Law Association, the Catechol Coalition, the Rhodia Group, Reach for Unbleached, and the Canadian Council of Grocery Distributors during the 60 day public comment period that took place from January 19, 2008, to March 19, 2008. A summary of the comments that relate specifically to the draft assessment on 1,2-benzenediol, along with responses, is presented in the table below. Comments related to subsequent risk management of the substance are addressed separately.

Comment	Response
The opinion was expressed that the precautionary approach taken, results in an inconsistent declaration that any exposure to 1,2-benzenediol poses an unacceptable risk even though Canadians consume healthful foods containing 1,2-benzenediol everyday. It was also expressed that the precautionary approach was inappropriately applied.	Health Canada's regulatory programs do conduct risk assessments of substances, for which naturally-occurring sources are a significant contributor to exposure. The screening assessment does indicate that current anthropogenic contributions to environmental exposures are considered to be negligible. A CEPA 'toxic' designation means the Government of Canada can take action to reduce anthropogenic sources now or in the future. The application of a precautionary approach is required by CEPA.
A commenter did not agree with the conclusion that 1,2-benzenediol is considered to be CEPA "toxic". However, the commenter believed that if the conclusion is not changed, that 1,2-benzenediol should not be added to Schedule 1 of CEPA 1999 but should have "no further action".	For the challenge screening assessment, the assessment of carcinogenicity was based principally on the conclusions of the International Agency for Research on Cancer (IARC). A CEPA 'toxic' designation with addition to schedule 1, means the Government of Canada can take action to reduce anthropogenic sources now or in the future.
An opinion was expressed that the weight-of-evidence approach was not appropriately or reasonably applied when making the draft conclusions in the screening assessment because not all of the information submitted by industry and stakeholders was appropriately considered.	The Government of Canada considers all information submitted by stakeholders and its inclusion in the screening assessment is based on factors such as its relevance to the screening assessment and confidential business information (CBI) status.
A commentator did not agree with IARC's classification of 1,2-benzenediol as a Group 2B carcinogen. As well, a commentator indicated that tumours are species-specific and that the weight of evidence shows that 1,2-benzenediol is not a genotoxic carcinogen.	For the Challenge screening assessments, the assessment of carcinogenicity was based principally on the conclusions of IARC. A mode of action for 1,2-benzenediol has not been fully elucidated. In the absence of a fully elucidated mode of action it cannot be precluded that tumours observed in experimental animals result from direct interaction with genetic material and are relevant to humans.
A concern was expressed that using an exposure scenario for black and white	Black-and-white photo developer was identified through the section 71 survey as being a potential source of

photo developer is unrealistic given the current labelling requirements and given that it is not a significant source of exposure to the Canadian public. A commentator indicated that a more realistic scenario would find the risk of exposure from black and white photo developer to be negligible, resulting only from failure to follow standard hygiene guidelines for handling photo developer.	exposure for the general population of Canada. Conservative default values were used to estimate exposure in our screening assessments. However more refined consumer product inhalation scenarios are also provided in the screening assessment report. The labelling requirements may cover dermal exposures (use of gloves, tongs) but will not account for inhalation exposures. In fact, dermal exposure was not used in the screening assessment report to calculate margins of exposure for non-cancer effects.
<p>An opinion was expressed that 1,2-benzenediol is assumed to be a non-threshold carcinogen in need of restriction for black and white photo developer and it is assume to be a threshold carcinogen when it is naturally present in foods.</p> <p>An opinion was also articulated that Health Canada and Environment Canada should not introduce new regulatory or control requirements for naturally occurring 1,2-benzenediol in fruits and vegetables.</p>	<p>In terms of non-cancer effects, a margin of exposure based on environmental exposures was not considered to be meaningful to calculate as anthropogenic contribution to exposure was negligible. However, derivation of margins of exposure for non-cancer effects and consumer product exposure (i.e. black and white photo developer) were considered appropriate and these margins were found to be adequate for non-cancer effects.</p> <p>A CEPA 'toxic' designation means the Government of Canada can take action to reduce anthropogenic sources now or in the future.</p>
A commenter expressed a concern that the potential hazards and risks associated with potential exposure to 1,2-benzenediol are exaggerated because not all of the information that was submitted was taken into consideration.	The Government of Canada considers all information submitted by stakeholders and its inclusion in the screening assessment is based on factors such as relevance to the screening assessment and CBI status.
A concern was articulated that the government failed to take into account the information available from other Canadian assessments of phenolics similar to 1,2-benzenediol.	Relevant information was not identified.
An opinion was expressed that information on consumer use of identified products was not sought from users, manufacturers or importers of this substance.	<p>Industry and interested stakeholders were asked to submit information (by responding to a mandatory survey notice, if applicable, and/or a voluntary questionnaire) that could be used to inform risk assessment and to develop and benchmark best practices for risk management and product stewardship.</p> <p>In the absence of further information on consumer use patterns, default consumer product scenarios were used to calculate upper-bounding estimates of exposure from consumer products. These scenarios have been refined in the assessment report.</p>

Summary of Public Comments Received on the Government of Canada's Risk Management Scope Document for Batch one substance 1,2-Benzendiol, CAS 120-80-9 (catechol) on the *Domestic Substances List*

The table below presents a summary of the comments received during the 60-day public comment period that took place from January 19, 2008 to March 19, 2008. Comments summarized below were received by one or more of the stakeholders listed.

Comments on this publication were provided by:

1. The Catechol Coalition
2. Rhodia Group
3. Reach for Unbleached
4. Canadian Environmental Law Association

Comment	Response
The primary exposure to catechol is through consumption of healthful foods. In comparison to exposure through fruits, vegetables, and refined olive oil, all other exposures are negligible.	It is indicated in the assessment that the releases from industrial and commercial uses of catechol are negligible compared to natural sources.
The Risk Management Scope fails to account for all of the risk management processes already in place for catechol.	Additional information on existing risk management regulations, instruments and / or tools has been addressed in the Risk Management Approach document.
The use of catechol in black and white photographic developing is limited to a very small subset of experienced artist and photo-hobbyist photographers and such use is already adequately addressed by product warning and labelling regulations that provide information about avoiding skin contact with developer solutions.	No additional risk management actions are proposed for the photographic sector other than encouraging users to follow the safety instructions on the label.
It is inconsistent to treat catechol as a non-threshold carcinogen for purposes of assessing risk to photo-developers, while treating it as a threshold carcinogen in natural foods.	Regardless of the exposure scenarios, catechol is considered to be a non-threshold carcinogen. While exposure to catechol does occur from naturally occurring sources, including some foods, it is also noted that there are anthropogenic uses of catechol. The screening assessment does indicate that current contributions to exposures from these anthropogenic uses are considered to be negligible. A CEPA "toxic" designation means the Government of Canada can take action to reduce exposure from anthropogenic sources now or in the future. The development of risk management actions will take into account socioeconomic and other considerations.

Comment	Response
<p>The risk management approach should focus on pulp and paper facilities as well as photography chemicals, as the major source of production of the chemical. Although catechol is theoretically destroyed in the routing of black liquor through recovery boilers, not all facilities are designed the same. Further, operating conditions are extremely variable, and this represents the major opportunity for environmental release, especially since black liquor spills are considered one of the main causes of toxicity spikes in effluent. The federal government should include the issue of spills and releases in its risk management.</p>	<p>While some catechol does enter the pulp and paper mill sewers through losses of pulping liquor, this catechol is typically removed in the wastewater treatment system.</p> <p>Information on the pulp and paper sector is included in the risk management approach documents.</p>
<p>An action plan to reduce and eliminate this substance over time is appropriate. The plan should be achieved by developing a pollution prevention strategy to address the use, sale, manufacture, export, import and disposal of catechol.</p>	<p>Catechol is a natural component of many living plants especially trees. Catechol is naturally released into the environment each year as part of the decay cycle of leaves and organic forest matter. The latest National Pollutant Release Inventory data shows that industrial releases are insignificant compared to natural releases, however, provisions will be developed to require that any new industrial uses are subject to notification of the government.</p>
<p>The government should establish a process by which safer alternatives to catechol are identified, assessed for safety, and promoted in application such as photography developing solution, adhesives, and deodorizers.</p>	<p>The screening assessment report did not identify any significant exposures from these products, and, therefore, no specific risk management actions are proposed for these uses.</p>
<p>The government should develop a regulation to prohibit the use of catechol in consumer products and ensure that the Canadian Cosmetic Hot List is implemented to the full extent.</p>	<p>Regarding adhesive consumer products, as described in the risk management approach document, there is negligible exposure to catechol through adhesives; therefore this sector will not be a candidate for risk management of catechol.</p> <p>The Cosmetics Hotlist currently prohibits all uses of catechol in Canadian cosmetics.</p>