

# Town of South Hadley

## Board of Health

### Regulation of the South Hadley Board of Health Restricting the use of Polystyrene Disposable Food Containers in Food Establishments

#### A. Statement of Purpose

Whereas styrene is a synthetic compound often used to make rubber, plastic, insulation, fiberglass, pipes, automobile parts, carpet backing and disposable food containers.<sup>1</sup>

Whereas published in the National Toxicology Program's 12th Report on Carcinogens (2011), styrene, a key ingredient in polystyrene and expanded polystyrene is reasonably anticipated to be a human carcinogen.<sup>2</sup>

Whereas styrene exposure can occur through smoking, inhalation of indoor air, and ingestion of food.<sup>3</sup>

Whereas styrene seeps out of polystyrene containers and into warm food and drink, causing a recommendation against microwaving polystyrene food containers.<sup>4</sup>

Whereas in a study concerning the migration of styrene in polystyrene cups to hot drinks, it was determined that the concentration of styrene monomer found in the drinks was above the Environmental Protection Agency recommended levels, including the Maximum Contaminant Level Goal (MCLG) standard.<sup>5</sup>

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<sup>1</sup> Agency for Toxic Substances & Disease Registry, (2011), *Toxic Substances Portal* (Styrene). Retrieved from: <http://www.atsdr.cdc.gov/substances/toxsubstance.asp?toxid=74>.

<sup>2</sup> National Toxicology Program, (NTP) (2011), *12th Report on Carcinogens (RoC)* (Substance Profile (Styrene). Retrieved from: <http://ntp.niehs.nih.gov/pubhealth/roc/roc12/index.html>.

<sup>3</sup> National Toxicology Program, (NTP) (2011), *12th Report on Carcinogens (RoC)* (Substance Profile (Styrene). Retrieved from: <http://ntp.niehs.nih.gov/pubhealth/roc/roc12/index.html>.

<sup>4</sup> The Way To Go, (2008), *Polystyrene Fact Sheets*. Retrieved from: <http://isites.harvard.edu/fs/docs/icb.topic967858.files/PolystyreneFactSheets.pdf>.

<sup>5</sup> Informa Healthcare, (2009), *Toxicology Mechanisms and Methods* (Determination of migration monomer styrene from GPPS (general purpose polystyrene) and HIPS (high impact polystyrene) cups to hot drinks). Retrieved from: <http://informahealthcare.com/doi/abs/10.1080/15376510802510299>.

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Whereas the amount of styrene monomer migration from polystyrene into hot drinks was dependent on the temperature and fat content of the drinks.<sup>6</sup>

Whereas exposure to styrene vapor can cause irritations of the eyes, nose, throat, and skin, as well as toxic effects on the liver, and can act as a depressant on the central nervous system that also causes neurological impairment.<sup>7</sup>

Whereas potential effects of styrene exposure during its production can cause eye and mucosal irritations and gastrointestinal issues. Possible effects on the central nervous system include headache, weakness, fatigue, depression, general dysfunction, hearing loss and peripheral neuropathy.<sup>8</sup>

Whereas workers with high exposure to styrene showed increased cancer of the lymphohematopoietic system and possibly related mortality, as well as increased levels of DNA adducts and genetic damage to lymphocytes.<sup>9</sup>

Whereas occupational studies concerning styrene have shown risks for workers for lymphohematopoietic cancers, such as leukemia and lymphoma, and genetic damage in the white blood cells, or lymphocytes, as well as increased risks for pancreatic and esophageal cancers.<sup>10</sup>

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<sup>6</sup> Informa Healthcare, (2009), *Toxicology Mechanisms and Methods* (Determination of migration monomer styrene from GPPS (general purpose polystyrene) and HIPS (high impact polystyrene) cups to hot drinks). Retrieved from: <http://informahealthcare.com/doi/abs/10.1080/15376510802510299>.

<sup>7</sup> Informa Healthcare, (2009), *Toxicology Mechanisms and Methods* (Determination of migration monomer styrene from GPPS (general purpose polystyrene) and HIPS (high impact polystyrene) cups to hot drinks). Retrieved from: <http://informahealthcare.com/doi/abs/10.1080/15376510802510299>.

<sup>8</sup> Environmental Protection Agency, (EPA) (2000), *Styrene*. Retrieved from: <http://www.epa.gov/ttn/atw/hlthef/styrene.html>.

<sup>9</sup> National Toxicology Program, (NTP) (2011), *12th Report on Carcinogens (RoC)* (Substance Profile (Styrene). Retrieved from: <http://ntp.niehs.nih.gov/pubhealth/roc/roc12/index.html>.

<sup>10</sup> National Toxicology Program, (NTP) (2011), *12th Report on Carcinogens (RoC)* (Fact Sheet (Styrene). Retrieved from: <http://ntp.niehs.nih.gov/pubhealth/roc/roc12/index.html>.

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Whereas styrene has caused lung tumors in mice.<sup>11</sup>

Whereas benzene, a component of polystyrene is a known carcinogen and enters the body through the respiratory system and skin contact.<sup>12</sup>

Whereas polystyrene is a harm to the environment. It makes up a considerable amount of debris in cities, and is harmful to the marine wildlife that it often arrives in.<sup>13</sup>

Whereas the environmental impacts of polystyrene rank second behind aluminum for total environmental impacts especially in energy consumption and greenhouse gas effects.<sup>14</sup>

Whereas over 80% of plastic pollution to the ocean comes from urban litter such as polystyrene.<sup>15</sup>

Whereas less than 35% of fast food restaurants' waste does not end up in landfills.<sup>16</sup>

Whereas polystyrene is not biodegradable and does not easily deteriorate in landfills, taking up more space than paper.<sup>17</sup>

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<sup>11</sup> National Toxicology Program, (NTP) (2011), *12th Report on Carcinogens (RoC)* (Fact Sheet (Styrene). Retrieved from: <http://ntp.niehs.nih.gov/pubhealth/roc/roc12/index.html>.

<sup>12</sup> The Way To Go, (2008), *Polystyrene Fact Sheets*. Retrieved from: <http://isites.harvard.edu/fs/docs/icb.topic967858.files/PolystyreneFactSheets.pdf>.

<sup>13</sup> The Way To Go, (2008), *Polystyrene Fact Sheets*. Retrieved from: <http://isites.harvard.edu/fs/docs/icb.topic967858.files/PolystyreneFactSheets.pdf>.

<sup>14</sup> The Way To Go, (2008), *Polystyrene Fact Sheets*. Retrieved from: <http://isites.harvard.edu/fs/docs/icb.topic967858.files/PolystyreneFactSheets.pdf>.

<sup>15</sup> Californians Against Waste, (2014), *The Problem of Polystyrene*. Retrieved from: [http://www.cawrecycles.org/issues/plastic\\_campaign/polystyrene/problem](http://www.cawrecycles.org/issues/plastic_campaign/polystyrene/problem).

<sup>16</sup> Californians Against Waste, (2014), *Polystyrene Takeout Food Packaging Pollution*. Retrieved from: [http://www.cawrecycles.org/issues/plastic\\_campaign/polystyrene](http://www.cawrecycles.org/issues/plastic_campaign/polystyrene).

<sup>17</sup> The Way To Go, (2008), *Polystyrene Fact Sheets*. Retrieved from: <http://isites.harvard.edu/fs/docs/icb.topic967858.files/PolystyreneFactSheets.pdf>.

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Whereas programs to recycle polystyrene are expensive, costing thousands of dollars per ton and litter clean-up costs billions.<sup>18</sup>

Whereas polystyrene is not recycled because it is not economic to wash, degrease, transport, and store in order to recycle.<sup>19</sup>

Whereas over 100 American, Canadian, European and Asian cities and towns have enacted a polystyrene ban.<sup>20</sup>

Therefore it is the intention of the South Hadley Board of Health to prohibit the purchase, sale, distribution and use of any polystyrene disposable food container used to serve prepared food in a food establishment.

### **B. Authority:**

This regulation is promulgated to the authority granted to the South Hadley Board of Health by Massachusetts General Laws Chapter 111, Section 31 that “Boards of Health may make reasonable health regulations”.

### **C. Definitions**

For the purpose of this regulation, the following words shall have the following meanings:

**Disposable Food Container:** Single use disposable containers used for the purpose of serving and transporting prepared, and ready-to-consume food or beverages. This includes but is not limited to plates, cups, bowls, trays, and hinged or lidded containers. This does not include single-use packaging for unprepared food, nor single-use items such as disposable straws, cup lids, or utensils.

**Expanded Polystyrene (EPS):** Polystyrene that has been expanded or “blown” using a gaseous blowing agent into a solid form.

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<sup>18</sup> Californians Against Waste, (2014), *The Problem of Polystyrene*. Retrieved from: [http://www.cawrecycles.org/issues/plastic\\_campaign/polystyrene/problem](http://www.cawrecycles.org/issues/plastic_campaign/polystyrene/problem).

<sup>19</sup> The Way To Go, (2008), *Polystyrene Fact Sheets*. Retrieved from: <http://isites.harvard.edu/fs/docs/icb.topic967858.files/PolystyreneFactSheets.pdf>.

<sup>20</sup> The Way To Go, (2008), *Polystyrene Fact Sheets*. Retrieved from: <http://isites.harvard.edu/fs/docs/icb.topic967858.files/PolystyreneFactSheets.pdf>.

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Food Establishment: An operation that stores, prepares, packages, serves, vends or otherwise provides food for human consumption, as further defined in 105 CMR 590.002. Any establishment requiring a permit to operate in accordance with the State Food Code, 105 CMR 590.000, et. seq., shall be considered a food establishment for purposes of this Board of Health regulation.

Polystyrene: Can also be referred to as “Styrofoam”, a trademarked brand owned by the Dow Chemical Company. A type of expanded polystyrene, a thermoplastic petrochemical material utilizing a styrene monomer and processed by any number of techniques including, but not limited to, fusion of polymer spheres (expandable bead polystyrene), injection molding, form molding, and extrusion-blow molding (extruded foam polystyrene). Polystyrene also refers to clear or solid polystyrene, also known as “oriented polystyrene”.

Prepared Food: Food and beverage prepared on the food provider’s premises for consumption using any food preparation or cooking technique. This does not include unprepared food such as uncooked raw meat, fish or eggs unless provided for consumption without further food preparation.

Styrene: A colorless, flammable liquid, characterized with a sweet odor and high volatility. This industrial chemical is used to make polystyrene.

### **D. Prohibition**

No food establishment shall use disposable food containers made from polystyrene or expanded polystyrene to provide prepared food to customers. No person shall purchase, offer for purchase, sell, give away, or distribute any polystyrene disposable food container from a food establishment.

### **E. Violations**

1. It shall be the responsibility of the establishment, state food code permit holder and/ or his or her business agent to ensure compliance with this regulation pertaining to the prohibition of his or her distribution of polystyrene disposable food containers in their establishment. The violator shall receive:

a. In the case of the first violation, a fine of one hundred dollars (\$100.00).

b. In the case of a second violation within 36 months of the date of the current violation, a fine of two hundred dollars (\$200.00) and the state food code permit shall be suspended for seven (7) consecutive business days.

c. In the case of three or more violations within a 36 month period, a fine of three hundred dollars (\$300.00) and the state food code permit shall be suspended for thirty (30) consecutive business days.

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### **F. Deferment:**

Upon written request to the South Hadley Board of Health and demonstration of how this regulation would cause undue hardship to the food establishment, such establishment may receive temporary deferment of this regulation to their operation for up to one (1) year. Food establishments may apply to the deferment process in accordance with the following:

a. An application for deferment must include all information necessary for the Board of Health to make its decision, including but not limited to documentation showing the factual support of undue hardship for the claimed deferment. "Undue hardship" is defined as a situation unique to the food establishment in which there are no reasonable alternatives to the use of polystyrene and expanded polystyrene disposable food containers and compliance with this regulation would create significant economic hardship for the food establishment and its operators. The Board of Health may request additional documentation from the applicant to make a decision regarding deferment.

b. A food establishment that receives deferment must reapply prior to the end of that period and continue to demonstrate undue hardship if its operators seek to continue their deferment. Deferments may only be granted for periods of up to one (1) year.

c. The Board of Health may approve the deferment with or without conditions. All deferment applications are final and effective immediately.

### **G. Non-Criminal Disposition**

Whoever violates any provision of this regulation may be penalized by the non-criminal method of disposition as provided in Massachusetts General Laws, Chapter 40, Section 21D or by filing a criminal complaint at the appropriate venue.

Each day any violation exists shall be deemed to be a separate offense.

### **H. Enforcement**

Enforcement of this regulation shall be by the South Hadley Board of Health or its designated agent(s).

Any person who desires to register a complaint pursuant to the regulation may do so by contacting the South Hadley Board of Health or its designated agent(s) and the Board shall investigate.

### **I. Severability**

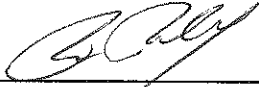
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If any provision of these regulation is declared invalid or unenforceable, the other provisions shall not be affected thereby but shall continue in full force and effect.

**J. Effective Date**

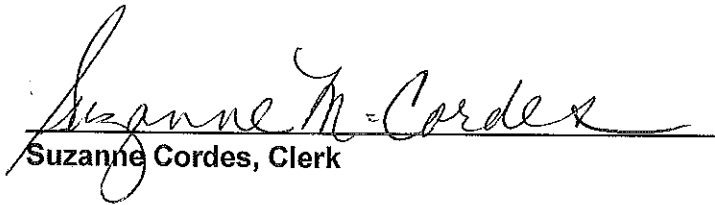
This regulation shall take effect on April 1, 2015



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Dr. Walter R. Wolf, DPM, Chair



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Dr. Michael A. Rosner, MD, Vice Chair



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Suzanne Cordes, Clerk