

Two Types of Raw Milk: Laboratory Testing of Raw Milk Samples for Pathogens Using Culture-Based Detection

The following table compares test results from milk produced by RAWMI-trained farmers and farmers-in-training with test results of raw milk produced by conventional dairying methods.

Culture-Based Detection of Pathogens in Raw Milk								
Study	# milk samples tested	total # pathogen tests	% Samples Positive for Target Pathogens					% samples with one or more pathogens
			Campylobacter	E. coli STEC	Listeria monocytogenes	Salmonella spp.	Yersinia spp.	
Milk produced using conventional dairying methods								
Jayarao and Henning (2001)	131	524	9.2	4.6	4.6	6.1	5.3	27
Jayarao et al. (2006)	248	992	2.0	2.4	1.2	6.0	1.2	11
Rohrbach et al. (1992)	292	876	12	N/A*	4.1	8.9	15.1	33
Steele et al. (1997)	1720	6880	0.5	0.9	2.7	0.2	N/A	4.1
Van Kessel et al. (2004)	861	1722	N/A	N/A	6.5	2.6	N/A	9.1
Van Kessel et al. (2008)	183	183	N/A	N/A	N/A	11	N/A	11
Milk produced using HACCP-based RAWMI methods								
BC Herdshare Association (2021)	208	832	0.0	0.0	0.0	0.0	N/A	0.0

* N/A: test data not available.

References:

BC Herdshare Association 2021. BC Fresh Milk Project. <http://tinyurl.com/bcfm-project>

Jayarao BM et al. 2001. Prevalence of Foodborne Pathogens in Bulk Tank Milk. *Journal of Dairy Science* 84(10):2157 - 2162

Jayarao BM et al. 2006. A survey of foodborne pathogens in bulk tank milk and raw milk consumption among farm families in Pennsylvania. *J Dairy Sci* 89:2451-8

Rohrbach RW et al. 1992. Prevalence of *L. monocytogenes*, *C. jejuni*, *Y. enterocolitica* and *Salmonella* in bulk tank milk: Risk factors and risk of human exposure. *J. Food Prot.* 55:93–97

Steele ML et al. 1997. Survey of Ontario bulk tank raw milk for food-borne pathogens. *J. Food Prot.* 60:1341–1346

Van Kessel JS et al. 2004. Prevalence of *Salmonellae*, *Listeria monocytogenes*, and fecal coliforms in bulk tank milk on US dairies. *J. Dairy Sci.* 87:2822–2830

Van Kessel JS et al. 2008. Environmental sampling to predict fecal prevalence of *Salmonella* in an intensively monitored dairy herd. *J Food Prot.* 71(10):1967-73