

Élevages Lisard

Nutritional Value of Feeder Insects Commonly Available in Canada

Feeder		Buffaloworms	Butterworms	Cockroaches*	Crickets	Earthworms	Fruit Flies	Hornworms	Mealworms	Phoenixworms	Silworms	Superworms	Waxworms	Woodlice
		<i>Alphitobius diaperinus</i>	<i>Chilecomadia moorei</i>	<i>Blatta lateralis</i>	<i>Acheta domestica</i>	<i>Lumbricus terrestris</i>	<i>Drosophila melanogaster</i>	<i>Manduca sexta</i>	<i>Tenebrio molitor</i>	<i>Hermetia illucens</i>	<i>Bombyx mori</i>	<i>Zophobas morio</i>	<i>Galleria mellonella</i>	<i>Porcellio scaber</i>
Weight	g	Min.	0.02	0.30	0.15	0.03	0.20	0.00	1.00	0.04	0.09	0.15	0.05	0.05
		Moy.	0.03	0.46	0.15	0.23	0.20	0.00	3.00	0.10	0.10	0.99	0.53	0.15
		Max.	0.04	1.00	0.15	0.35	0.20	0.00	10.00	0.17	0.11	3.00	0.60	0.30
Moisture	%	Min.	65.00	58.54	69.10	68.20	78.50	68.80	85.00	61.90	61.20	82.70	56.15	58.50
		Moy.	65.00	59.37	70.42	69.23	81.93	69.42	85.00	62.88	61.20	84.27	57.18	61.25
		Max.	65.00	60.20	71.73	70.50	83.70	70.40	85.00	64.80	61.20	87.40	57.90	65.90
Protein	%	Min.	23.75	15.50	17.77	19.30	9.89	8.50	8.72	17.40	8.80	19.10	14.10	13.26
		Moy.	23.75	15.85	18.39	20.61	10.43	16.76	8.86	17.40	9.13	20.32	14.87	13.26
		Max.	23.75	16.20	19.00	22.50	10.90	21.04	9.00	19.82	17.50	22.16	16.10	13.26
Fat	%	Min.	7.24	5.21	7.49	4.28	0.72	3.72	3.07	12.33	9.40	17.60	15.82	3.70
		Moy.	7.24	17.31	8.75	5.67	1.67	4.80	3.09	12.88	11.70	21.96	21.28	3.70
		Max.	7.24	29.40	10.00	6.80	2.70	5.88	3.10	13.40	14.00	30.58	24.90	3.70
Ash	%	Min.	1.75	0.80	1.20	1.10	0.60	1.33	1.12	0.90	3.50	1.10	0.60	10.52
		Moy.	1.75	0.92	1.58	1.47	2.42	1.69	1.12	1.08	3.50	1.20	0.83	10.52
		Max.	1.75	1.04	1.95	1.77	4.80	2.23	1.12	1.20	3.50	1.40	0.92	10.52
Fiber	%	Min.	2.55	1.40	2.20	2.60	0.10	3.14	1.42	2.14	3.00	0.90	2.70	1.64
		Moy.	2.55	1.40	2.90	2.95	1.62	6.38	1.42	2.31	3.00	1.03	2.70	2.41
		Max.	2.55	1.40	3.60	3.20	2.45	8.00	1.42	2.50	3.00	1.10	2.70	3.40
Calcium	ppm	Min.	105	125	385	407	444	296	464	169	8155	177	243	46275
		Moy.	105	277	461	447	1741	407	464	294	8748	189	306	46275
		Max.	105	429	537	500	2478	526	464	414	9340	200	375	46275
Phosphorus	ppm	Min.	3150	2250	1760	2700	1565	3108	-	2850	3560	2370	1950	3926
		Moy.	3150	2250	2223	2906	1685	3531	-	2948	4458	2385	2288	3926
		Max.	3150	2250	2686	3069	1900	4084	-	3100	5355	2400	3000	2800
Ca:P Ratio	-	Min.	0.03	0.06	0.20	0.14	0.28	0.10	-	0.06	1.52	0.08	0.11	11.79
		Moy.	0.03	0.06	0.21	0.16	1.02	0.12	-	0.10	2.07	0.08	0.11	11.79
		Max.	0.03	0.06	0.22	0.19	1.58	0.13	-	0.14	2.62	0.08	0.13	11.79
Chitin	ppm	Min.	-	11.10	6.70	21.50	-	-	-	19.60	21.00	8.40	-	15.80
		Moy.	-	11.10	6.70	21.50	-	-	-	19.60	21.00	8.40	-	15.80
		Max.	-	11.10	6.70	21.50	-	-	-	19.60	21.00	8.40	-	15.80
References		9	7,8	4,8	1,2,3,11	2,3,11	2,3,4	6,12	1,2,3,11	5,8	1,2,11	2,10,11	1,2,3,11	4

NOTE 1: All units (% and ppm) are on a as fed basis which include the water content of the feeder insect. This way, results are more easily compared.

NOTE 2: Major variations between results can be attribute to factors like the diet fed and the life stage of the feeder insect used for the analysis.

* Please note that all non-native cockroaches are illegal everywhere in Canada. Their nutritional analysis is provided for comparative purposes only.

This chart is a compilation of many nutritional analysis from many different sources. All the datas are the sole property of their respective owners.

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Références / References

1	FINKE, M.D., 2007, "Estimate of Chitin in Raw Whole Insects", Zoo Biology 26, p105–115
2	FINKE, M.D., WINN, D., 2004, "Insects and Related Arthropods: A Nutritional Primer for Rehabilitators", J. Wildlife Rehab. 27(3–4), p14–27
3	BERNARD, J.B., ALLEN, M.E., 1997, "Feeding Captive Insectivorous Animals: Nutritional Aspects of Insects as Food", NAG Handbook, Fact Sheet 003
4	OONINCX, D.G.A.B, DIERENFELD, E.S., 2011, "An Investigation Into the Chemical Composition of Alternative Invertebrate Prey", Zoo Biology 29, p1–15
5	Phoenixworms Website (http://www.phoenixworm.com/servlet/the-template/comparison/Page)
6	Great Lakes Hornworm Website (http://www.greatlakeshornworm.com/faq)
7	The Butterworm Store Website (http://www.thebutterwormstore.com/catalog/)
8	FINKE, M.D., 2012, "Complete Nutrient Content of Four Species of Feeder Insects", Zoo Biology 00, p1–15
9	DESPINS, J.L., AXTELL, R.C., 1995, "Feeding Behavior and Growth of Broiler Chicks Fed Larvae of the Darkling Beetle, <i>Alphitobius diaperinus</i> ", Poultry Science 74, p331-336
10	JABIR, M.D.A.R., RAZAK, S.A., VIKINESWARY, S., 2012, "Chemical Composition and Nutrient Digestibility of Super Worm Meal in Red Tilapia Juvenile", Pak Vet J, 32(4), p489-493.
11	FINKE, M.D., 2002, " Complete Nutrient Composition of Commercially Raised Invertebrates Used as Food for Insectivores", Zoo Biology 21, p269–285
12	FINKE, M.D., 2004, "Nutrient Content of Insects", Encyclopedia of Entomology
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