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ANALYSIS OF SAMPLES OF COKE SOLD IN CANADA.

By

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During the last few years a large number of coke samples have been examined in the laboratories of the Division of Fuels and Fuel Testing, Mines Branch, at Ottawa. The analyses of forty-nine of these samples are given in the following table, and inasmuch as these analyses were made on typical cokes from widely separated points, they should be representative of the different kinds of cokes sold in different parts of the country. Most of the samples were sent in (at our request) from distributing firms, several of which were the manufacturers. The size of the samples forwarded varied from one hundred pounds or so, to five hundred pounds and larger. Inasmuch as they were grab samples, they do not necessarily represent the average coke sold over any considerable period of time, but they may be considered as roughly representative of the coke sold at the time the samples were sent in. Care, however, has been taken to ensure that the analyses reported in the following table are near the average for all the samples of any particular coke on record at the Fuel Testing Laboratories. Of the total of forty-nine typical cokes given, eleven were gas cokes, thirty-five by-product cokes of different domestic sizes, and three were foundry coke.

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TABLE I - ANALYSES OF COKE SAMPLES

Lab. No.	Name of coke	Size	Proximate analysis and calorific value (as received basis)					Sulphur %	Fusibility of ash °F.	Apparent Density (water=1.00)
			Moisture %	Ash %	Volatile Matter %	Fixed Carbon %	B.T.U. per pound			
2385	Besco by-product	small	0.2	6.4	0.9	92.5	13120		2110	0.895
3091	" "	"	0.6	6.9	1.7	90.8	13100	1.7	2050	
3374	" "	medium	0.8	7.1	1.8	90.3	12960	1.6	2010	0.827
4114	" "	mixed	0.3	7.9	2.0	89.8	13010	1.7		0.84
3073	Montreal gas coke	mixed	2.4	10.3	5.8	81.5	12590	1.0	2370	0.790
3074	" " "	"	1.0	10.0	2.4	86.6	12560	0.7		0.790
2789	Ottawa gas coke	"crushed"	0.6	12.9	1.9	84.6	12060	1.0	(2650)	0.840
3065	" " "	"	0.2	12.1	1.9	85.8	12250	1.0		0.860
3893	" " "	large	0.5	11.0	1.1	87.4	12420	1.0		0.85
3894	" " "	crushed	0.5	10.0	1.0	88.5	12890	0.9		0.85
3895	" " "	nut	0.9	12.8	1.6	84.7	12200	1.1		0.85
3897	" "new process coke"	mixed	0.3	10.7	0.9	88.1	12690	0.9		0.98
(2590)	Dunbar by-product	egg	0.5	13.1	1.3	85.1	11970	1.9	2270	
2591	Pann-Can. "	nut	0.8	11.5	1.6	86.0	12190	1.0	2260	
3039	Solvay (Hamilton)	stove	1.0	8.0	2.0	89.0	12950	0.6	2535	
2624	Toronto gas coke	mixed	0.6	8.8	2.7	87.9	12810	0.9	(2680)	0.800
2625	" " "	"	0.7	9.4	3.6	86.3	12740	1.3		0.820
3032	Solvay (Buffalo) by-product	egg	0.3	10.3	1.3	88.1	12580	0.7	(2700)	0.930
3033	" " "	stove	0.3	8.7	1.7	89.3	12900	0.6	2630	0.965
3034	" (Detroit) "	nut	0.6	8.2	2.2	89.0	12960	0.6	(2700)	0.965
3035	" " "	pea	0.8	12.1	1.8	85.3	12380	0.7	2570	0.980
4117	" by-product	egg	0.3	9.7	2.2	87.8	12850	0.7		0.87
4118	" " "	nut	0.2	8.4	1.9	89.4	13120	0.6		0.86
4119	" " "	"	0.4	9.2	2.8	87.6	12800	0.6		0.87

TABLE I - ANALYSES OF COKE SAMPLES (continued)

Lab. No.	Name of coke	Size	Proximate analysis and calorific value (as received basis)					Sulphur %	Fusibility of ash °F.	Apparent Density (water=1.00)
			M. Moisture %	Ash %	Volatile Matter %	Fixed Carbon %	B.T.U. per pound			
2632	Hamilton by-product coke	egg	(0.5)	8.6	1.6	89.3	12520	0.9	2425	
2945	" " "	"	0.5	8.5	1.7	89.3	12940	0.7		
3066	" " "	"	0.5	7.2	1.9	90.3	13330	0.6	2445	0.870
3067	" " "	stove	1.5	7.1	2.1	89.3	13090	0.5	2450	0.860
3068	" " "	nut	0.6	7.6	2.2	89.6	12990	0.6		0.900
3069	" " "	pea	0.4	7.4	3.1	89.1	13360	0.5		0.865
3898	" " "	stove	0.4	7.2	1.3	91.1	13330	0.6		0.91
3899	" " "	nut	1.4	6.8	1.7	90.1	13300	0.6		0.88
3588	Winnipeg by-product coke	stove	0.2	7.9	1.0	90.9	13140	0.6	(2700)	0.980
3589	" " "	nut	0.1	8.7	1.0	90.2	12960	0.7		0.990
3590	" " "	stove	0.0	7.3	0.8	91.9	13090	0.5	(2700)	1.025
3591	" " "	nut	0.1	7.6	0.9	91.4	13030	0.6		1.020
3036	Vancouver gas	mixed	4.4	21.0	6.6	68.0	10830	0.6	2370	0.885
4115	Steel Co. of Canada by-product	stove	0.4	10.3	2.3	87.0	12760	1.0		0.89
4116	" " " "	nut	0.9	11.9	2.9	84.3	12430	1.0		0.92
3739	Donner by-product	mixed	0.2	10.7	1.4	87.7	12380	0.9		
4120	" " "	egg	0.1	10.3	2.1	87.5	12690	0.9		0.90
4121	" " "	nut	0.1	10.5	2.3	87.1	12570	0.9		0.95
3913	Oto by-product	mixed small	1.4	11.6	2.6	84.4	12510	1.0		
4112	" " "	egg	0.8	13.7	2.3	83.2	12100	1.8		0.83
4113	" " "	nut	0.4	10.5	2.0	87.1	12650	0.8		0.87
4134	" " "	mixed	0.3	10.0	2.5	87.2	12760	0.8		0.86
3497	Hamilton foundry coke	over 3"	0.6	7.3	3.3	88.7	13450	0.6		0.845
2287	Steel Co. blast furnace coke	mixed	0.3	11.2	1.3	87.1			2410	
3592	Besco foundry coke	over 3"	0.8	6.7	2.0	90.5	13240	1.4	1985	0.855