TABLE 8 (CONTINUED)

Code	Species	Mult.	λ(Å)	log gf	Ref.	W_{eq}	log(N/N_T)	Code	Species	Mult.	λ(Å)	log gf	Ref.	W_{eq}	log(N/N_T)
26.01	Fe II	38	3935.96	−1.86	N4	18	−4.78	26.01	Fe II	J	5018.44	−1.22	MF	88	−4.44
26.01	Fe II	3	3938.29	−4.07	N4	11	−4.72	26.01	Fe II	J	5021.59	−0.30	KX	11	−4.37
26.01	Fe II	190	3938.97	−1.85	N4	16	−4.71	26.01	Fe II	J	5022.79	−0.02	KX	12	−4.60
26.01	Fe II	127	4024.55	−2.44	N4	11	−4.99	26.01	Fe II	J	5035.71	0.61	KX	27	−4.63
26.01	Fe II	172	4048.83	−2.14	N4	23	−4.34	26.01	Fe II	J	5061.72	0.22	KX	11	−4.88
26.01	Fe II	28	4122.67	−3.38	N4	15	−4.82	26.01	Fe II	J	5070.90	0.24	KX	11	−4.88
26.01	Fe II	27	4233.17	−1.81	N4	77	−4.36	26.01	Fe II	J	5075.76	0.28	KX	12	−4.78
26.01	Fe II	27	4273.33	−3.34	N4	11	−4.95	26.01	Fe II	J	5093.58	0.11	KX	12	−4.65
26.01	Fe II	28	4296.57	−3.01	N4	24	−4.81	26.01	Fe II	J	5097.27	0.31	KX	25	−4.37
26.01	Fe II	27	4303.18	−2.61	N4	51	−4.38	26.01	Fe II	J	5106.11	−0.28	KX	10	−4.38
26.01	Fe II	27	4351.77	−2.08	N4	44	−5.16	26.01	Fe II	J	5145.77	−0.40	KX	8	−4.33
26.01	Fe II	J	4357.58	−2.10	KX	11	−4.59	26.01	Fe II	J	5150.49	−0.12	KX	11	−4.46
26.01	Fe II	27	4385.39	−2.57	N4	34	−4.92	26.01	Fe II	J	5169.03	−0.87	MF	90	−4.72
26.01	Fe II	27	4416.83	−2.60	N4	33	−4.92	26.01	Fe II	J	5199.12	0.10	KX	7	−4.92
26.01	Fe II	37	4489.18	−2.97	N4	23	−4.83	26.01	Fe II	J	5216.85	0.81	KX	19	−5.01
26.01	Fe II	37	4491.40	−2.70	N4	24	−5.04	26.01	Fe II	J	5228.90	−0.30	KX	7	−4.49
26.01	Fe II	38	4508.29	−2.21	N4	42	−4.99	26.01	Fe II	J	5232.79	−0.06	KX	14	−4.37
26.01	Fe II	37	4515.34	−2.48	N4	34	−4.99	26.01	Fe II	J	5234.62	−2.05	MF	45	−4.84
26.01	Fe II	37	4520.22	−2.60	N4	33	−4.91	26.01	Fe II	J	5247.95	0.55	N4	18	−4.74
26.01	Fe II	38	4522.63	−2.03	N4	47	−5.03	26.01	Fe II	J	5254.93	−3.23	KX	11	−4.79
26.01	Fe II	38	4541.52	−3.05	N4	17	−4.92	26.01	Fe II	J	5257.12	0.03	KX	9	−4.66
26.01	Fe II	37	4555.89	−2.29	N4	42	−4.94	26.01	Fe II	J	5260.25	1.07	KX	33	−4.82
26.01	Fe II	38	4576.34	−3.04	N4	17	−4.93	26.01	Fe II	J	5272.40	−2.03	MF	16	−4.44
26.01	Fe II	37	4582.84	−3.10	N4	15	−4.94	26.01	Fe II	J	5276.00	−1.94	MF	45	−4.96
26.01	Fe II	38	4583.84	−2.02	N4	60	−4.62	26.01	Fe II	J	5291.67	0.58	KX	17	−4.86
26.01	Fe II	D	4596.02	−1.84	N4	12	−4.69	26.01	Fe II	J	5339.59	0.54	KX	17	−4.80
26.01	Fe II	38	4620.52	−3.28	N4	15	−4.76	26.02	Fe III	4	4419.60	−2.22	KX	7	−4.56
26.01	Fe II	37	4629.34	−2.37	N4	38	−4.98	28.01	Ni II	12	4015.47	−2.42	KX	4	−6.44
26.01	Fe II	186	4635.32	−1.65	N4	22	−4.65	28.01	Ni II	11	4067.03	−1.29	KX	12	−7.03
26.01	Fe II	28	4666.76	−3.33	N4	11	−4.90	39.01	Y II	6	3950.35	−0.49	HL	12	−7.90
26.01	Fe II	43	4731.45	−3.13	N4	17	−4.82	39.01	Y II	6	3982.59	−0.49	HL	11	−7.96
26.01	Fe II	J	4913.29	0.01	KX	11	−4.69	39.01	Y II	14	4124.90	−1.50	HL	4	−7.25
26.01	Fe II	J	4951.58	0.18	KX	14	−4.69	39.01	Y II	22	4900.12	−0.09	HL	14	−7.74
26.01	Fe II	J	4977.04	0.04	KX	11	−4.65	39.01	Y II	20	5205.72	−0.34	HL	12	−7.57
26.01	Fe II	J	4990.51	0.18	KX	13	−4.72	40.01	Zr II	16	3998.95	−0.67	GB	6	−7.84
26.01	Fe II	J	4993.36	−3.65	MF	6	−4.88	40.01	Zr II	30	4045.64	−0.60	KX	8	−7.74
26.01	Fe II	J	5001.96	0.90	KX	30	−4.86	80.01	Hg II	–	3983.94	−1.73	DW	83	−4.83
26.01	Fe II	J	5004.20	0.50	KX	18	−4.85								

from one line and should be taken with caution. For HR 8937 we adopted the Hg abundance derived by Dolk et al. (2003). They found an abundance of -4.23 ± 0.43 dex, i.e., a relatively high value. We compared this value with an estimation using the equivalent width of λλ3984 and derived −4.06 dex, i.e. also a high abundance for HgII in this star.

For star HR 8118, the abundances of CII, AlII and ScII seem to be relatively high compared to other HgMn stars. However, these values are based on the measurement of few lines (2, 1 and 1, respectively) and should be taken with caution. On the other hand, the abundances of CrII, YII and ZrII are also relatively high, from a greater number of lines (23, 9 and 13, respectively). We caution that this star has the highest $v \sin i$ in our sample (30 ± 1 km s^{-1}) which suggest that high abundance values in different species might be due to blends with another lines. However this effect is not clearly seen in the FeII abundances (63 lines), and thus the CrII abundance could be real. A comparison of higher resolution spectra with synthetic spectra is needed to verify the abundance of Cr, Y and Zr in this star.

HeI was slightly underabundant for the sample of HgMn stars and underabundantin HR 8937. O was slightly underabundant in the stars HR 3273 and HR 8567. MgII was underabundant, except for HR 8118 (which is close to the solar value). SiII was close to solar in HR 8118 and HR 8937, and underabundant in HR 3273 and HR 8567. Fe was slightly underabundant in HR 3273 and HR 8567, and slightly overabundant in HR 8118 and HR 8937. The species Sc, Ti, Cr, Mn, Sr, Y and Zr were overabundant while Ni was underabundant.

As we said in the Introduction, our purpose is to discuss the possible trend of the abundances of the critical elements in HgMn stars with stellar parameters. Papers in the literature show that the abundances of some elements seem to correlate with the effective temperature (e.g., Smith & Dworetsky 1993; Smith 1997; Woolf & Lambert 1999; Jomaron et al. 1999; Dolk et al. 2003). However, it is not clear (for instance) how the abundances are corre-