TABLE 5

SENSITIVITY OF THE DERIVED ABUNDANCES OF HR 3273 TO CHANGES IN EFFECTIVE TEMPERATURE AND SURFACE GRAVITY

HR 3273 Element	$\log N/H$ for adopted model	$\log N/H$ for 500 K hotter model	$\log N/H$ for 0.5 dex greater model
CII	−3.61	−3.96	−3.57
OI	−3.23	−3.15	−3.27
MgI	−5.17	−4.68	−5.26
MgII	−5.11	−5.02	−5.08
AlII	−6.80	−6.83	−6.70
SiII	−4.92	−4.95	−4.89
PII	−5.97	−6.13	−5.89
SII	−4.99	−5.28	−4.91
CaII	−5.57	−5.31	−5.70
ScII	−8.03	−7.72	−8.00
TiII	−6.35	−6.06	−6.30
CrII	−5.53	−5.32	−5.45
MnI	−4.63	−4.13	−4.68
MnII	−4.68	−4.52	−4.59
FeI	−4.34	−3.93	−4.37
FeII	−4.75	−4.67	−4.65
FeIII	−4.56	−4.81	−4.38
NiII	−6.74	−6.66	−6.57
YII	−7.68	−7.37	−7.64
ZrII	−7.79	−7.46	−7.72

TABLE 6

HE/H DETERMINATION FOR THE SAMPLE OF HGMN STARS

Line	HR 3273	HR 8118	HR 8567	HR 8937
3867	0.08	—	—	—
4026	0.07	0.09	0.09	0.03
4121	0.08	—	0.09	—
4471	0.06	0.09	0.07	0.03
4713	0.06	0.09	0.08	0.03
4921	—	—	0.09	—
Average	0.07±0.01	0.09	0.08±0.01	0.03

for HR 3273, HR 8567 and HR 8937, respectively, with a mean offset of −0.23 dex. For HR 8118 we used our estimation based on the equivalent width of $\lambda\lambda$ 3984 (−5.03 dex) and then we added the mean offset (−0.23 dex), obtaining finally −5.26 dex for the Hg abundance of this star. This is not a perfect solution as some very sharp-lined HgMn stars have $\lambda\lambda$ 3984 lines with a unique distribution of Hg isotopes.

5. DISCUSSION

HR 3273, HR 8118, HR 8567 and HR 8937 are main sequence stars with anomalous abundances, i.e. different from solar values. The comparison of derived and solar abundances for the HgMn stars is presented in the Table 7. We included the rms of the average abundance for each species and the number of lines n involved in the average. Solar abundances have been taken from Grevesse, Noels, & Sauval