ASM-I Media Preparation Directions

The media used in this laboratory (Sasner and Haney) is based upon the ASM-I media from; Charmichael, W. and Gorham, P.; 1974, *Journal Of Phycology* 10: 238-240. This media is based upon a media from; Gorham, Maclachlan, Hammer and Kim,; 1964, *Ver. Int. Ver. Theor. Angu. Limn.* 15: 798-804 (there should be a copy of both these papers in this notebook).
The chemical constituents and their concentrations for each of these media are as follows in mg/l.

Chemical	Gorham 1964	Gorham74	Sasner/Haney
$NaNO_3$	170.2	170	169.8
$MgCl_2*6H_2O$	40.7	19.2	100.8
$MgSO_4*7H_2O$	49.3	24.08	86.3
$CaCl_2*2H_2O$	22.2	22.2	29.0
K_2HPO_4	17.42	17.4	17.4
$Na_2HPO_4*7H_2O$	14.2	14.2	50.63
$FeCl_2*6H_2O$	1.88	.65	1.8
$MnCl_2*4H_2O$	3.89	.87	2.175
$ZnCl_2$	.436	.44	1.63
$CoCl_2*6H_2O$	.0019	.01	.00348
$CuCl_2*2H_2O$	.000136	.0001	.000172
H_2BO_3	2.47	2.47	2.47
$Na_2EDTA*2H_2O$		6.64	8.24

There are some variations to the media used in the Sasner/Haney cultures. the predominate ones being an increase in the amounts of magnesium, sodium/phosphate and Zinc. I could find no documentation as to the reason for this and have assumed that a less alligitrophic media was needed. In any case this is the recipe used.

The first 4 chemicals are combined into one stock media solution to from a Stock Minerals Solution. To get a 5ml stock solution for 1 liter of media you put the following amounts of chemicals into your stock solution.

Chemical	Sasner/Haney (g/l)
$NaNO_3$	33.96
$MgCl_2*6H_2O$	20.16
$MgSO_4*7H_2O$	17.36
$CaCl_2*2H_2O$	5.8

The next 2 chemicals are combined to form the Stock Phosphate Solution. For a 5ml stock solution into 1 liter media use the following amounts.

Chemical	Sasner/Haney (g/l)
K_2HPO_4	3.58
$Na_2HPO_4*7H_2O$	10.12

The next five chemicals are combined to form the Stock Metals Solution. For a 5ml stock solution into 1 liter media use the following amounts.

Chemical	Sasner/Haney
$FeCl_2*6H_2O$	.36
$MnCl_2*4H_2O$	.43
$ZnCl_2$	.33
$CoCl_2*6H_2O$	.0069
$CuCl_2*2H_2O$	.00034
H_2BO_3	.49

The last chemical is made up separately and used as a buffer in the final media to bring it to a pH of approximately 7 to 7.5.