GRAIN ANALYSIS REQUEST SHEET

2022 / 23

Job #: **G** _____

Project Leader: | Department: | Date Submitted:

Person submitting samples: | Phone: | # of Samples:

Send Data to (e-mail Address):

BILLING INFO: Please complete one of the three boxes to indicate the method of payment

Upfront Payment	**UMN Invoice (A-Rate)** - EFS Chart String:	**Non-UMN Invoice (B or C Rate)** - CustomerID # :
Credit Card ☐ Last 4 digits:		Billing Contact name/number:
Check ☐ Number:		Physical Address (required):
Cash ☐	Grant Expiration Date:	Purchase Order (if needed):

Name of Study: **Check if samples will be picked up** ☐ Are Samples Ground? ☐YES ☐NO]

Grain Type:

RATE SCHEDULES (SUBJECT TO CHANGE)

‡ SAMPLES WILL BE DISCARDED 3 MONTHS AFTER COMPLETION OF ANALYSIS

A: University of Minnesota (all Colleges, Departments,Research and Outreach Centers)

B: Government Agencies, other Colleges and Universities

C: Private Individuals and Organizations

NOTE: RUSH REQUESTS WILL BE CHARGED TWO TO THREE TIMES THE RATE SHOWN

PLEASE USE THE "SAMPLE COUNT" COLUMN TO ENTER THE NUMBER OF SAMPLES FOR EACH TEST REQUEST

Test Code	Determinations Requested	Sample Count	Rate C	Rate B	Rate A	Rate Total	Set-up * Charge
G 01	Grinding:		**6.70**	**4.30**	**3.00**		**25.00**
G 02	Moisture (%):		**17.40**	**10.70**	**7.20**		**25.00**
G 03	Oil (%)		**39.00**	**24.00**	**16.50**		**25.00**
G 04	Total Nitrogen (%): *Elementar VarioMAX C/N*		**27.20**	**17.00**	**11.10**		**30.00**
G 05	Fatty Acid Composition: *Methyl Esters addition and GC Analysis*						
G 06	Amino Acids: *Full suite by GC-MS*						
G 07	Proximate: Protein, crude oil, moisture, fiber & ash						
G 08	Crude Protein:		**23.00**	**15.00**	**11.00**		**25.00**
G 09	Crude Fiber:		**17.40**	**10.70**	**7.20**		**110.00**
G 10	Ash (%) *(485°C)*		**17.40**	**10.70**	**7.20**		**25.00**
	Elemental Analysis by Inductively Coupled Plasma Optical Emission Spectrometry (ICP - OES)						
	Dry ashing method (485°C ashing temperature)						
G 11	**A.** 15 element: Al B Ca Cd Cr Cu Fe K Mg Mn Na Ni P Pb Zn		**50.30**	**31.50**	**21.00**		**30.00**
	B. 27 element: Al As B Ba Be Ca Cd Co Cr Cu Fe K Mg Mn						
G 12	Mo Na Ni P Pb Rb S Si Sr Ti V Zn		**67.20**	**42.00**	**28.50**		**30.00**
	C. Post dry ash boiling treatment for improved recovery						
G 13	Fe, Al, Cr / other refractories. *Additional cost*		**31.00**	**19.60**	**13.60**		**30.00**
	Wet ashing method (microwave with HNO3-H2O2 digest)						
G 14	**A.** 15 element: Al B Ca Cd Cr Cu Fe K Mg Mn Na Ni P Pb Zn		**67.70**	**42.40**	**28.90**		**55.00**
	B. 27 element: Al As B Ba Be Ca Cd Co Cr Cu Fe K Mg Mn						
G 15	Mo Na Ni P Pb Rb S Si Sr Ti V Zn		**81.20**	**50.70**	**33.90**		**55.00**
G 16	Mercury						
G 17	Other ***quoted***						

***Dry ashing may not give complete recovery for Al, Be, Cr, Fe, Si, Ti, & V. See (C).*

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(612) 624-3420 (FAX)

Subtotals: $ _____ $ _____

Total Billing: $ _____

Date Completed: _____

Billing Date: _____

See reverse side for further instructions ➔

SAMPLE SIZE AND PACKAGING

The sample size required for each analysis is as follows:

Percent Moisture…… 5.0 g Meal, 10.0 g Whole Beans
Oil Extraction……3.0 g Dried Sample
Nitrogen/Protein…….. 0.5 g Dried Sample
Fatty Acid Composition……..1.0 g Oil
Sugar Composition…….. 3.0 g Dried De-Fatted Sample
Amino Acid Composition……3.0 g Dried De-Fatted Sample

If pre-ground samples are sent, ***please provide 5- to 10-g*** samples in **plastic bags or glass containers**. For some determinations samples may need to be dried at 65°C, and kept in a desiccator until weighing. Samples should be grouped into small packets in numerical order. Packaging and labels that require significant set-up effort will be surcharged for the additional labor.

Total N determined by Elementar combustion analyzers. Any nitrate present is included in the Total Nitrogen value.

LABELING AND CODING SAMPLES

Please provide an example of sample codes or attach a sample key.
(Electronic (*.xlsx) files are appreciated.)

Limit sample code to a maximum of six alpha-numeric characters.

Results will be reported according to the sample identifications we receive.

Sample Code	*Sample Code*	*Sample Code*	*Sample Code*

SAMPLE DISPOSAL

Samples will be discarded three months after data is sent from the laboratory, due to limited storage space.

CHAIN OF CUSTODY

Samples delivered by: _____ Received by: _____

Samples picked up by: _____ Date: _____