

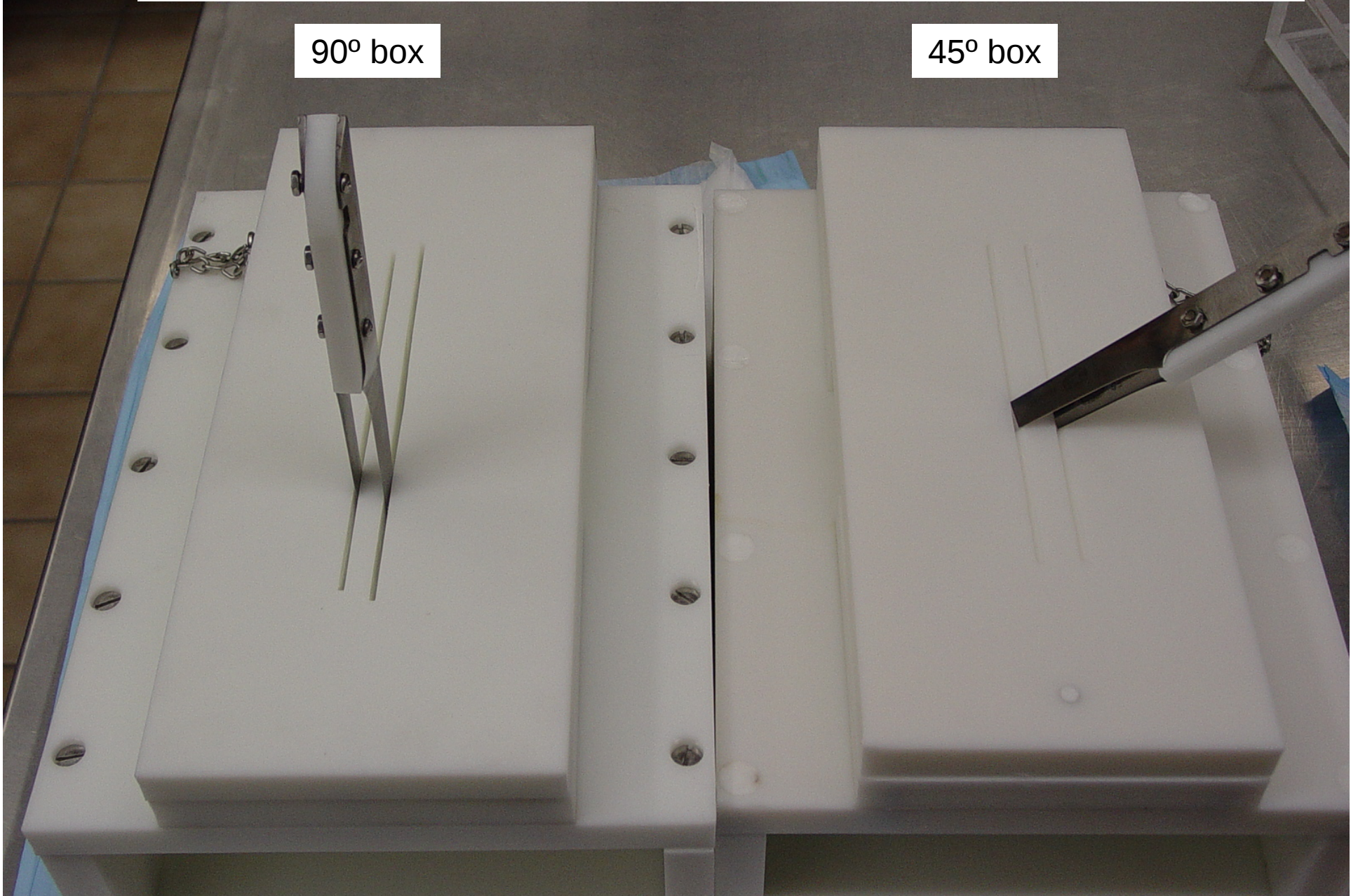
USMARC Slice Shear Force Procedure for Beef Semimembranosus (SM)

- This project was funded, in part, by The Beef Checkoff.

SSF sampling of SM is conducted with the 90° box

90° box

45° box

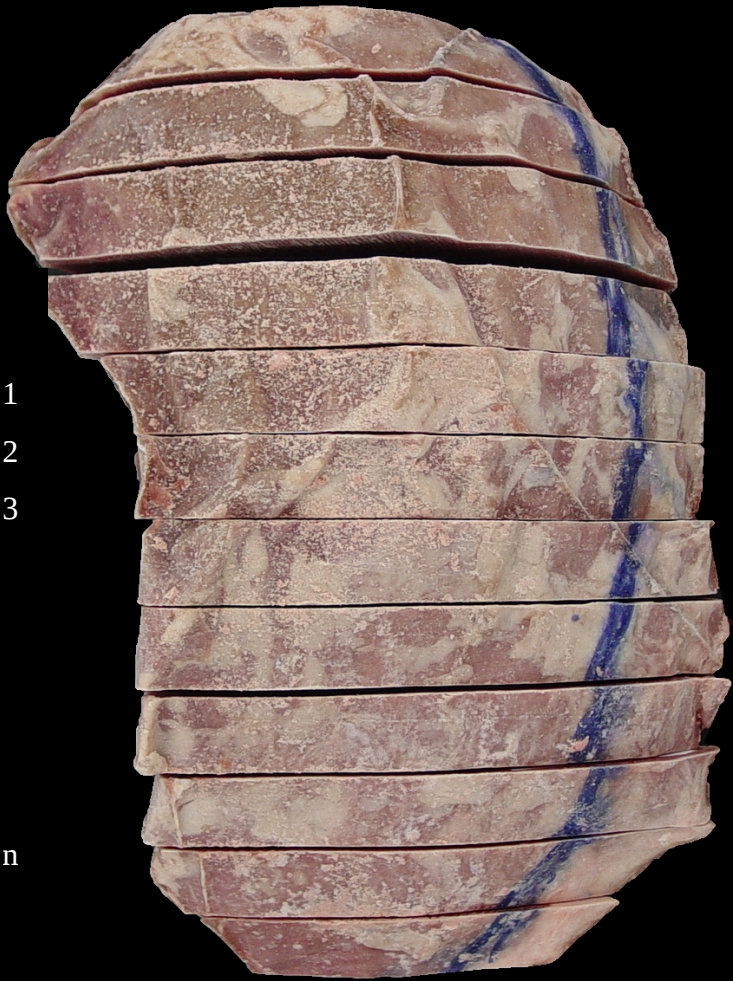


On the following slides, a picture of a frozen steak is shown rather than a cooked steak. This was done in order to more clearly show steak orientation. But, slice shear force measurement is conducted on cooked steaks. Steaks are sampled and slice shear force is measured immediately after completion of cooking.

SM
Right
Steak 1
Steak 2
Steak 3
.
.
.
.
.
Steak n



SM
Right
Steak 1
Steak 2
Steak 3
.
.
.
.
.
Steak n



This picture shows Semimembranosus (SM) from the right side of a carcass. The procedure is identical regardless of which side of the carcass the cut originated from.

Steak 1



Steak 2



Steak 3



Steak 4



Steak 5



Steak 6



Steak 7



Steak 8



Steak 9

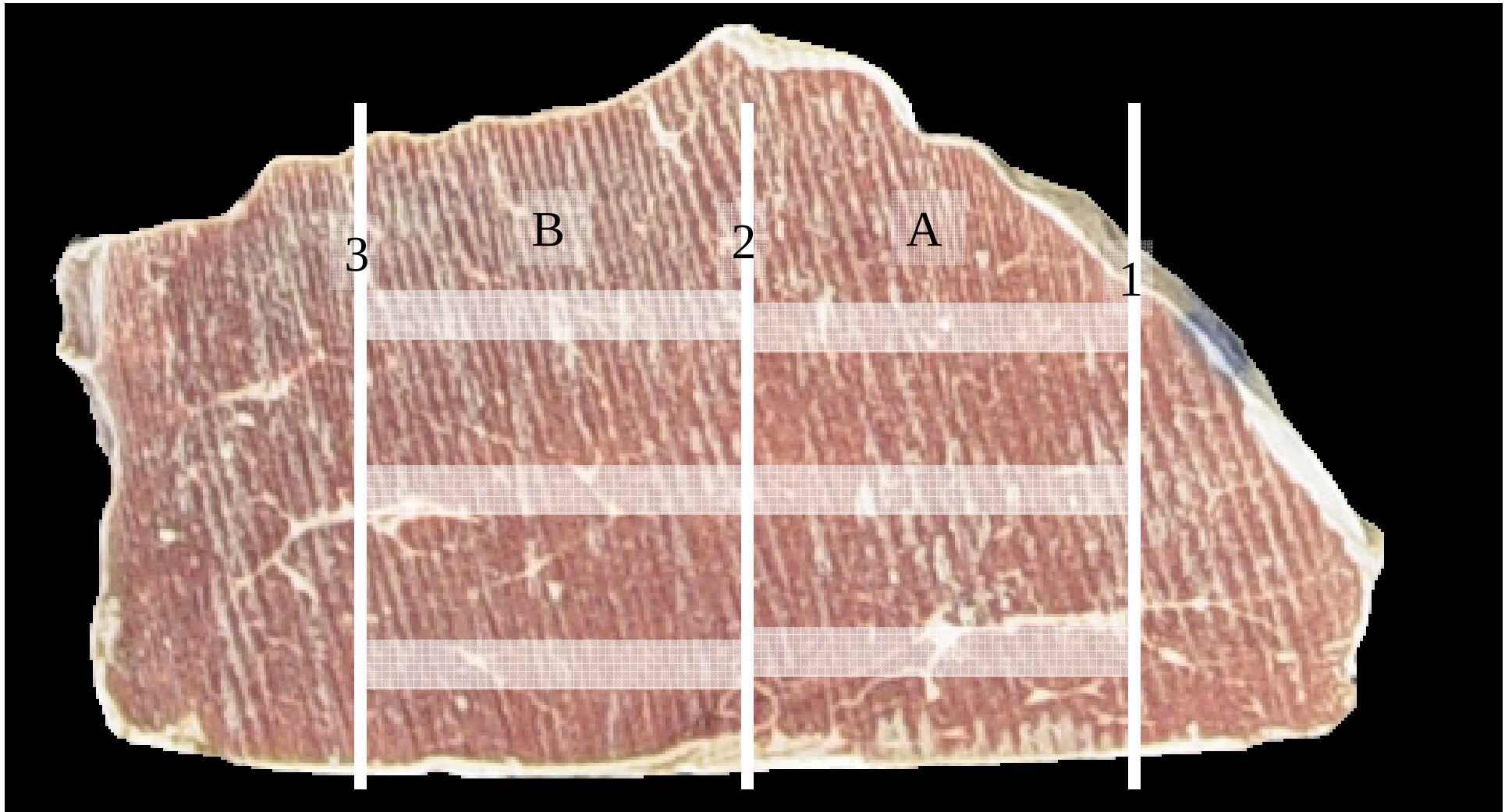


Steak 10

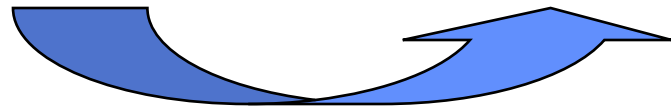
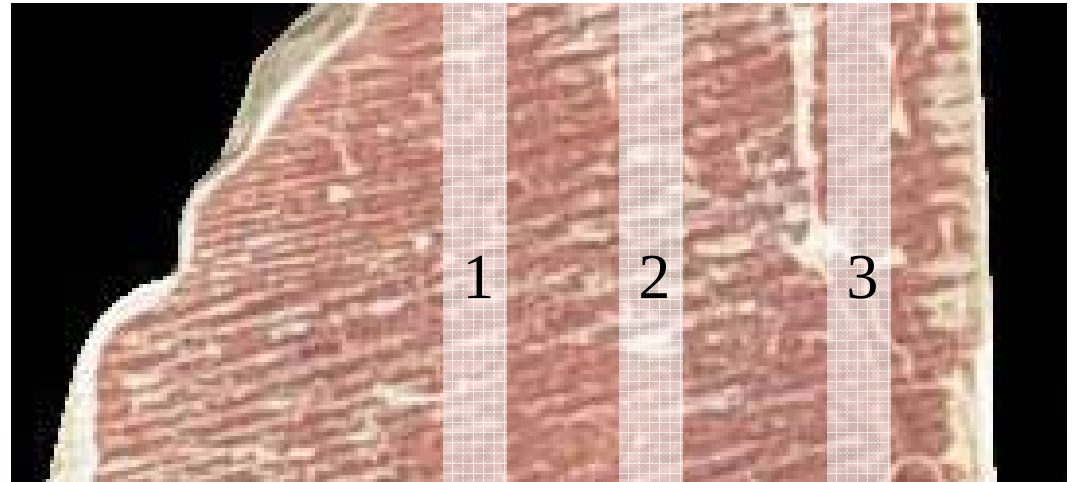


Steak 11

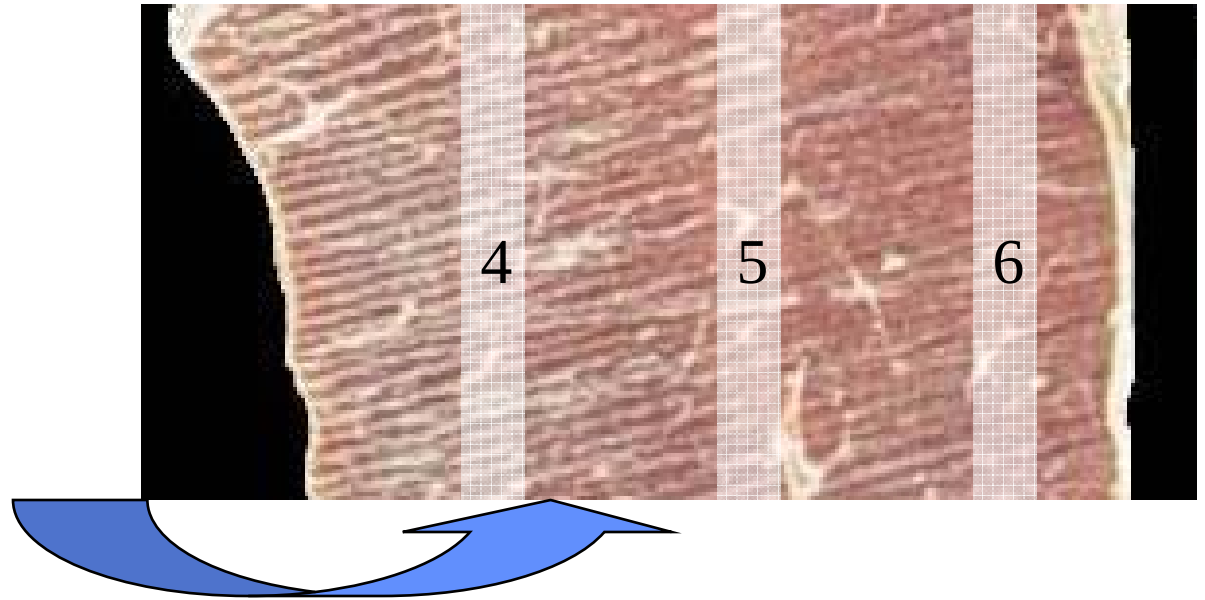




Orient the steak with the blue mark at the top right. Identify the best 10 cm for sampling columns A (5 cm) and B (5 cm) . If the steak is really small, then just take one column. If you cannot get three slices per section, then get two.



Make cuts 1 and 2 and rotate the piece **counter clockwise** and place in the 90 degree box. Obtain the 1st slice near the top (now on the left) of the section. Obtain the 2nd slice in the center and the 3rd slice near the bottom (now on the right). Space the slices approximately equally.



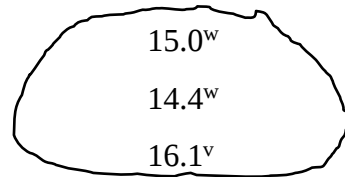
Make cuts 3 and 4 and rotate the piece **counter clockwise** and place in the 90 degree box. Obtain the 4th slice near the top (now on the left) of the section. Obtain the 5th slice in the center and the 6th slice near the bottom (now on the right). Space the slices approximately equally.

Sample data sheet for SM SSF

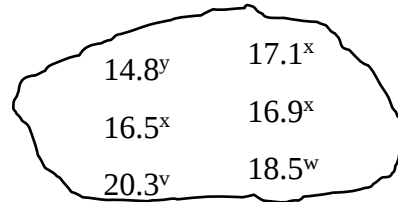
Fresh_SSF_Data

Date	Yellow tag ID	Muscle	Location	Slice box	SSF	Notes	DPM
07/01/2009	2001	01_SM	011_Right_Top	90°			15
07/01/2009	2001	01_SM	012_Right_Center	90°			15
07/01/2009	2001	01_SM	013_Right_Bottom	90°			15
07/01/2009	2001	01_SM	014_Left_Top	90°			15
07/01/2009	2001	01_SM	015_Left_Center	90°			15
07/01/2009	2001	01_SM	016_Left_Bottom	90°			15
07/01/2009	2002	01_SM	011_Right_Top	90°			15
07/01/2009	2002	01_SM	012_Right_Center	90°			15
07/01/2009	2002	01_SM	013_Right_Bottom	90°			15
07/01/2009	2002	01_SM	014_Left_Top	90°			15
07/01/2009	2002	01_SM	015_Left_Center	90°			15
07/01/2009	2002	01_SM	016_Left_Bottom	90°			15
07/01/2009	2003	01_SM	011_Right_Top	90°			15
07/01/2009	2003	01_SM	012_Right_Center	90°			15
07/01/2009	2003	01_SM	013_Right_Bottom	90°			15
07/01/2009	2003	01_SM	014_Left_Top	90°			15
07/01/2009	2003	01_SM	015_Left_Center	90°			15
07/01/2009	2003	01_SM	016_Left_Bottom	90°			15
07/01/2009	2004	01_SM	011_Right_Top	90°			15
07/01/2009	2004	01_SM	012_Right_Center	90°			15
07/01/2009	2004	01_SM	013_Right_Bottom	90°			15
07/01/2009	2004	01_SM	014_Left_Top	90°			15
07/01/2009	2004	01_SM	015_Left_Center	90°			15
07/01/2009	2004	01_SM	016_Left_Bottom	90°			15
07/01/2009	2005	01_SM	011_Right_Top	90°			15
07/01/2009	2005	01_SM	012_Right_Center	90°			15
07/01/2009	2005	01_SM	013_Right_Bottom	90°			15
07/01/2009	2005	01_SM	014_Left_Top	90°			15
07/01/2009	2005	01_SM	015_Left_Center	90°			15
07/01/2009	2005	01_SM	016_Left_Bottom	90°			15

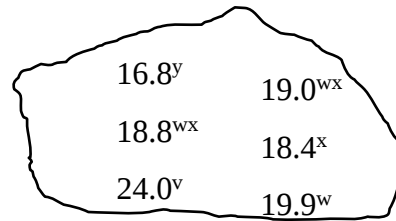
Steak 1=15.2^g



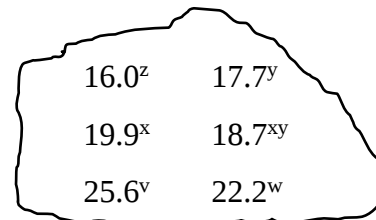
Steak 2=17.3^f



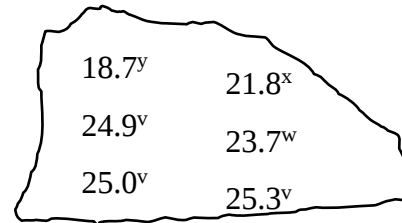
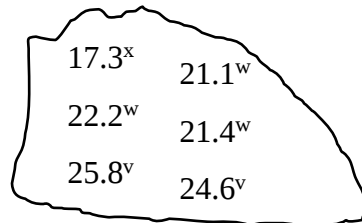
Steak 3=19.5^e



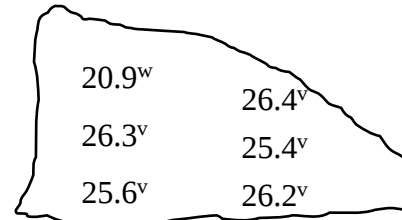
Steak 4=20.0^e



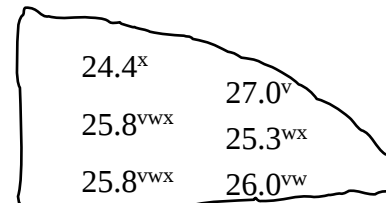
Steak 5=22.1^d



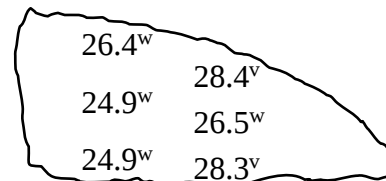
Steak 6=23.2^c



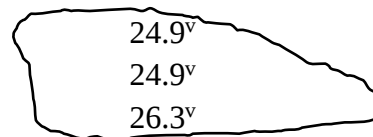
Steak 7=25.1^b



Steak 8=25.7^{ab}



Steak 9=26.5^a



Steak 10=25.5^b