

**4 Channel Castell LES Protocol**

**LES Study**

LES Profile Data

Proximal:  
Distal:  
Total LES Length:  
PIP:  
Intra-abdominal LES Length:

LES Data

Omnidirectional sensor  
Channel 5 (4) at 45.0 cm  
Number of measurements: 6

Measured

LESP:  
Residual Pressure:  
Percent Relaxation:

Normal

10.0 - 45.0 mmHg  
< 8.0 mmHg

**4 Channel Castell Body Protocol**

**Lower Esophageal Body Study**

Number of wet swallow measurements:  
Summary results are means.

Proximal:

Amplitude:  
Duration:

Channel 2 at 30.0 cm

Normal

30 - 180 mmHg  
3.0 - 6.0 sec

Mid:

Amplitude:  
Duration:

Channel 3 at 35.0 cm

Normal

30 - 180 mmHg  
3.0 - 6.0 sec

Distal:

Amplitude:  
Duration:

Channel 5 at 40.0 cm

Normal

30 - 180 mmHg  
3.0 - 6.0 sec

Distal Esophageal Amplitude:

> 50 mmHg

Onset Velocity:

Velocity:  
Peristaltic contractions:

Normal

> 3.0 cm/sec  
> 80 %

**Upper Esophageal Body Study**

Number of wet swallow measurements: 3  
Summary results are means.

Proximal:

Channel 2 at 22.0 cm

Normal

30 - 180 mmHg

Duration:	<u>2.5 sec</u> <<<	(3 swallows)	3.0 - 6.0 sec
<u>Mid:</u>	<u>Channel 3 at 27.0 cm</u>		<u>Normal</u>
Amplitude:	52 mmHg	(3 swallows)	30 - 180 mmHg
Duration:	<u>2.9 sec</u> <<<	(3 swallows)	3.0 - 6.0 sec
<u>Distal:</u>	<u>Channel 5 at 32.0 cm</u>		<u>Normal</u>
Amplitude:	31 mmHg	(3 swallows)	30 - 180 mmHg
Duration:	<u>2.1 sec</u> <<<	(3 swallows)	3.0 - 6.0 sec

**4 Channel Castell UES Protocol**

**UES Study**

UES Data

Channel 5 (3) at 20.0 cm  
Number of measurements:

UESP:	<u>Measured</u>	<u>Normal</u>
Residual Pressure:		30.0 - 118.0 mmHg
Duration:		< 8.0 mmHg
		400 - 690 msec

Pharyngeal Data:

Number of measurements:

Peak Pressure:

Channel 3 at 15.0 cm

Measured

Normal

60.0 - 190.0 mmHg

Pharyngeal Data:

Number of measurements:

Peak Pressure:

Channel 4 at 17.0 cm

Measured

Normal

60.0 - 190.0 mmHg

Pharyngeal Onset Velocity:

Velocity:  
Peristaltic contractions:

Channel 3 to 4

Normal

Signature: \_\_\_\_\_