Example of Past Contest Materials

National 4-H Livestock Skillathon
Commercial Wool Judging Class Questions

Rank the wool fleeces:

1st_____2nd_____3rd_____4th_____

Put the number of the fleece that best answers the question in the blank space to the left of each question.

_____1. Which fleece will yield the most pounds of clean wool?
_____2. Which fleece has the finest fiber diameter?
_____3. Which fleece is the shortest stapled (fiber length)?
_____4. Between fleece 1 and 3, which has less grease?
_____5. Between fleece 1 and 3, which is finer?

Hay Purchasing/Evaluation

Rank this hay in the order that you would feed it as a supplemental protein source to 1300 lb. mature black baldy cows grazing corn stalks during mid-gestation. Feeding conditions are during late fall and early winter in the upper Midwest. This hay will be hand-fed to supply an extra half-pound of crude protein per cow per day.

1st _____ 2nd _____ 3rd _____ 4th _____

Forage Analysis

Sample	Dry Matter	Crude Protein	ADF	NDF	TDN	Price/ton
1	91%	11%	35%	47%	46%	$70
2	87%	21.0%.	29%	38%	64%	$135
3	92%	7.5%	48%	58%	42%	$55
4	89%	18.0%	34%	45%	52%	$90

Questions

1) Which hay would require the most labor to hand feed to deliver a ha1f-pound of crude protein? _____
2) Which hay contains the highest percentage of alfalfa leaves? _____
3) Which hay is most like corn stalks in its crude protein content? _____
4) How many pounds of sample 2 would it take to deliver a half-pound of crude protein? A)1.51bs B)2.51bs C)4.01bs D)5.0ibs _____
5) Which of the grass hay samples appears to be less mature? _____

Meat and Carcass Team Skillathon Activity

Directions: This activity consists of three tasks. Task 1 is to rank the retail class (50 points). Task 2 is to determine the fat thickness and rib eye area measurement on the picture, determine the yield grade for a beef carcass and determine the quality grade based on the two pictures (assume the carcass is "A" maturity). Place your answer in the blank provided.

	Answer	**Score**
Task1: Ranking: _____-_____-_____-_____(50 points)	_____	_____
Task 2: A) Fat Thickness measurement (5 points) (to nearest .05; Ex. .20, .25, .30):	_____	_____
B) Rib Eye Area measurement (5 points) (to nearest .1; Ex. 6.8, 10.3, 15.4):	_____	_____
C) Yield Grade determination (5 points) (to nearest .1; Ex. 2.3, 3.2, 3.3):	_____	_____
D) Quality Grade determination (1) (5 points)	_____	_____
E) Quality Grade determination (2) (5 points)	_____	_____

Select one of the following quality grades to place in the blank:

High Prime	High Choice	High Select	High Standard
Average Prime	Average Choice	Low Select	Low Standard
Low Prime	Low Choice		

Breed Identification Contestant #_____

(Place the letter of the correct breed and the letter of the correct breed description in the blanks beside the number that corresponds to the pictures)

Breed	Description
1. ___	___
2. ___	___
3. ___	___
4. ___	___
5. ___	___
6. ___	___
7. ___	___
8. ___	___
9. ___	___
10. ___	___
11. ___	___
12. ___	___
13. ___	___
14. ___	___
15. ___	___
16. ___	___
17. ___	___
18. ___	___
19. ___	___
20. ___	___

Beef Breeds

A. Angus
B. Brahman
C. Charolais
D. Chianina
E. Gelbvieh
F. Hereford
G. Limousin
H. Santa Gertrudis
I. Shorthorn
J. Simmental

Beef Breed Descriptions

a. Developed in Switzerland, noted for high growth rate, milking ability, and carcass cutability
b. Hardy British breed which in recent years combined polled and horned associations
c. Large framed, developed in Italy as dual purpose for beef and draft
d. British breed with highest number of registration in the U.S. noted for mothering ability and carcass marbling
e. High growth breed originally from France know for cutability
f. *Bos indicus* breed with heat and insect tolerance
g. Developed in Germany with good carcass cutability and relatively early puberty
h. Developed in France with moderate growth rate and frame size and high carcass cutability
i. Developed in Texas by crossing the Brahman and Shorthorn breeds
j. British breed with three distinct color patterns

Sheep Breeds

M. Cheviot
N. Columbia
O. Corriedale
P. Dorset
Q. Finnsheep
R. Hampshire
S. Katahdin
T. Merino
U. Rambouillet
V. Southdown
W. Suffolk

Sheep Breed Descriptions

m. Small framed, early maturing meat breed developed in England
n. Small sized meat breed noted for its hardiness from Scotland
o. Large framed, English, meat breed with black face and wool cap
p. Very fine fleece breed with heavy wool production from Spain
q. Large frame wool breed developed from crossing Lincoln or Leicester rams on Merino ewes
r. Wool breed developed in France and Germany from Merino breed
s. Hair breed developed in U.S. that does not require shearing because it sheds it's wool
t. Large framed, black faced breed known for high growth rate and carcass cutability from England
u. Lighter muscled breed from Finland noted for prolificacy
v. English, white face, meat breed known for out of season breeding
w. Large frame U.S. breed, developed from Lincolns and Rambouillets

Swine Breeds

X. Berkshire
Y. Chester White
Z. Duroc
AA. Hampshire
BB. Hereford
CC. Landrace
DD. Pietrain
EE. Poland China
FF. Spot
GG. Yorkshire

Swine Breed Descriptions

x. Noted for high growth rate, durability, and pork quality, developed in New Jersey and New York
y. Known as a maternal breed with droopy ears, developed in PA.
z. Dual purposed breed, red with white markings on head and lower body
aa. Black & white, developed in U.S. noted for rapid growth and as aggressive breeders
bb. Lean, heavy muscled, black breed with six white points and droopy ears
cc. Known as "Mother Breed" they are typically long bodied and sound with erect ears
dd. Predominately black with erect ears, originally from England noted for pork quality tenderness and marbling
ee. Noted for large litters and large droopy ears, generally refined in bone
ff. Noted for extreme muscle volume and shape, with a high propensity for stress which is related to pork quality concerns
gg. Terminal sire breed with unique color markings noted for cutability

Goat Breeds

HH. Angora
II. Boer
JJ. Cashmere
KK. Kiko
LL. Spanish

Goat Breed Descriptions

hh. Healthy animals, don't jump, luxurious fiber, from Australia
ii. No consistent color, mostly wild, brought over by Coronado and De Soto
jj. First breed involved in meat production performance testing, extended breeding season
kk. Small animals with strong elastic fiber, dyes well, adaptable
ll. Prolific, rapid growth, climate adaptable, from New Zealand feral stock

Livestock Equipment Identification

Place the letter of the correct piece of equipment and use category in the blanks to the right of each numbered piece of equipment

I.D.	Equipment I.D. List	
1. _____	A. Ammonia sensor	AA. Knife steel
2. _____	B. Antiseptic applicator	BB. Lamb boot
3. _____	C. Automatic dose syringe	CC. Lamb puller
4. _____	D. Balling gun	DD. Lamb rib eye grid
5. _____	E. Breeding catheter	EE. Long nose forceps
6. _____	F. Breeding harness	FF. Nasal cannula
7. _____	G. Beef cattle frame stick	GG. Needle holder
8. _____	H. Beef halter	HH. Needle teeth clippers
9. _____	I. Beef rib eye grid.	II. Nipple waterer
10 _____	J. Calf jack/puller	JJ. Nose lead
11 _____	K. Cattle straw	KK. Paint branding iron
12 _____	L. Cauterizing tail docker	LL. Paper wool twine
13 _____	M. Curry comb	MM. Pig resuscitator
14 _____	N. Drench gun	NN. Prolapse ring retainer
15 _____	0. Earnotchers	00. Ralgro implant gun
16_____	P. Elastrator	PP. Rice pelvimeter
17 _____	Q. Electric fence tester	QQ. Scotch comb
18 _____	R. Electronic I. D. tag	RR. Scrotal tape
19 _____	S. Emasculator	SS. Sheep shears
20 _____	T. Ewe spoon	TT. Smoke stick
21 _____	U. Forage probe	UU. Synovex- C implants
22 _____	V. Heat detection patch	VV. Test tube
23 _____	W. Hog snare	WW. Tube dehorner
24 _____	X. Hoof chisel	XX. Tube feeder
25_____	Y. Hoof trimmer	YY. Vacutainer
26 _____	Z. Intravenous set	ZZ. Wool card
27 _____		
28 _____		
29 _____		
30 _____		

Performance and Marketing
2010 National Skillathon Contest
100 points

Scenario:
Your task is to compare these 3 boars, their performance and their progenies performance to answer the following questions. Additionally you are required to explain orally in 2 minutes which boar's progeny is the most productive and other notables.

Boar #	NBA	LWT	DAYS	BF	LBS	TSI	MLI	SPI
1	0.04	-0.91	3.27	0.02	0.05	86.3	93.5	99.8
2	0.66	2.78	-3.28	-0.04	0.80	120.5	121.5	116.0
3	0.14	1.08	-2.10	-0.02	0.48	116.6	110.8	103.5

Choose the best answer to the following questions. (33 points possible – 3 points apiece)

1. True or False: A higher Days EPD is superior to a lower Days EPD.
2. Which boar had the most desirable maternal EPD and indexes?
3. Which board had the most desirable terminal EPD and indexes?
4. What does NBA stand for?
5. List the measurements that make up the TSI index.
6. List the measurements that make up the SPI index.
7. What does MLI stand for?
8. Which boar's progeny would pass on the least desirable carcass traits?
9. Which boar was below average for Terminal Sire Index?
10. Which boar's progeny would take the shortest time to get to 250 pounds?
11. Does the boar with the 2nd lowest NBA also have the 2nd lowest LWT?

Boar #1 Progeny

A group of 100 barrows weighed 40 pounds upon arrival to the finishing house and cost an average of $20/head. During the feed trial they consumed 30 tons of feed, which had an average cost of $270 per ton. The average live weight at harvest was 240 pounds with an Average Daily Gain of 1.5 pounds per day. These barrows were on feed of a total of 133 days. When this progeny was harvested, they averaged .8 inches of backfat, carcass weights of 170, and had 6.0 square inches of loineye. This boar's progeny had some incidence of having pork quality problems.

1. To the nearest tenth, what was the feed conversion on this pen? _____(3 pts)

2. What was the total feed cost per head $_____/head (3 pts)

3. To the nearest hundredth, what was the total feed cost per pound of gain $_____/lb. (3 pts)

4. What percent muscle did this pen of barrows average? (3 pts)
    a. 56.5
    b. 54.4
    c. 51.9

Boar #2 Progeny

A group of 100 barrows weighed 50 pounds upon arrival to the finishing house and cost an average of $40/head. During the feed trial they consumed 29 tons of feed, which had an average cost of $270 per ton. The average live weight at harvest was 280 pounds with an Average Daily Gain of 2.0 pounds per day. These barrows were on feed of a total of 115 days. When this progeny was harvested, they averaged .6 inches of backfat, carcass weights of 195 and had 8.0 square inches of loineye.

5. To the nearest tenth, what was the feed conversion on this pen? _____(3 pts)

6. What was the total feed cost per head $_____/head (3 pts)

7. To the nearest hundredth, what was the total feed cost per pound of gain $_____/lb. (3 pts)

8. What percent muscle did this pen of barrows average? (3 pts)
    a. 56.5
    b. 54.4
    c. 51.9

Boar #3 Progeny

A group of 100 barrows weighed 45 pounds upon arrival to the finishing house and cost an average of $30/head. During the feed trial they consumed 30 tons of feed, which had an average cost of $270 per ton. The average live weight at harvest was 260 pounds with an Average Daily Gain of 1.85 pounds per day. These barrows were on feed of a total of 116 days. When this progeny was harvested, they averaged .7 inches of backfat, carcass weights of 180 and had 7.0 square inches of loineye.

9. To the nearest tenth, what was the feed conversion on this pen? _____(3 pts)

10. What was the total feed cost per head $_____/head (3 pts)

11. To the nearest hundredth, what was the total feed cost per pound of gain $_____/lb. (3 pts)

12. What percent muscle did this pen of barrows average? (3 pts)
    a. 56.5
    b. 54.4
    c. 51.9

13. Based on the information provided, which boar would you select next year for your breeding program that would increase both maternal and terminal traits in your operation? (10 points) Please explain your reasons to the station monitor. (20 points)

2010 National 4-H Livestock Skillathon
Individual Quality Assurance Exercise
November 15, 2010

Your working crew is preparing to process a group of lambs. The average weight of the lambs is estimated to be 100 pounds. Before working the lambs your team should prepare a lamb-processing plan that indicates the products administered dosage, route, location, and any pre-slaughter withdrawal times. All products were administered on November 15 at 1 p.m.

The following products are to be administered. Product label information is attached.

1. **Bar Vac CDT**
2. **BO SE**
3. **Ivomec**

BOEHRINGER INGELHEIM VETMEDICA, INC.

2621 NORTH BELT HIGHWAY, ST. JOSEPH, MO, 64506-2002

Telephone: 800-325-9167
800-325-9167
Fax: 816-236-2717
Website: www.bi-vetmedica.com
www.productionvalues.us
www.thinkmetacam.com
www.vetmedin-us.com
www.yourdogsheart.com
Email: info@productionvalues.us

BAR VAC® CD/T

Boehringer Ingelheim

Clostridium Perfringens Types C & D-Tetanus Toxoid

U.S. Vet. Lic. No.: 124

Composition: Prepared from cultures of the organisms listed. Alum precipitated.

Indications: Recommended for the vaccination of healthy, susceptible sheep, goats and cattle against enterotoxemia and tetanus caused by the toxins of *Clostridium perfringens* Types C and D and *Clostridium tetani.* Although *Cl. perfringens* Type B is not a significant problem in the U.S.A., immunity may be provided against the beta and epsilon toxins elaborated by *Cl. perfringens* Type B. This immunity is derived from the combination of Type C (beta) and Type D (epsilon) fractions.

Dosage and Administration:

Cattle: Using aseptic technique, inject 5 mL subcutaneously. Repeat in 21 to 28 days and once annually.
Sheep and Goats: Using aseptic technique, inject 2 mL subcutaneously. Repeat in 21 to 28 days and once annually.

Precaution(s): Store out of direct sunlight at 35-45°F (2-7°C). Avoid freezing. Shake well before using. Use entire contents when first opened.

Caution(s): Anaphylactoid reactions may occur.

Antidote(s): Administer epinephrine.

Warning(s): Do not vaccinate within 21 days before slaughter.

BI 1203-1 3/01

Presentation: 10 cattle doses or 25 sheep/goat doses (50 mL) and 50 cattle doses or 125 sheep/goat doses (250 mL).

NAC No.: 10280111

INTERVET/SCHERING-PLOUGH ANIMAL HEALTH

Distributed by INTERVET/SCHERING-PLOUGH ANIMAL HEALTH
29160 INTERVET LANE, P.O. BOX 318, MILLSBORO, DE, 19966-0318

Toll-Free:	800-992-8051
Customer Service:	800-441-8272
Website:	www.intervetusa.com
Email:	Information.USA@intervet.com

BO-SE®

℞

Intervet/Schering-Plough Animal Health

(SELENIUM, VITAMIN E)

Injection

FOR VETERINARY USE ONLY

CAUTION Federal law restricts this drug to use by or on the order of a licensed veterinarian.

DESCRIPTION BO-SE (selenium, vitamin E) is an emulsion of selenium-tocopherol for the prevention and treatment of white muscle disease (Selenium-Tocopherol Deficiency) syndrome in calves, lambs, and ewes, and as an aid in the prevention and treatment of Selenium-Tocopherol Deficiency in sows and weanling pigs. **Each mL contains:** 2.19 mg sodium selenite (equivalent to 1 mg selenium), 50 mg (68 USP units) vitamin E (as *d*-alpha tocopheryl acetate), 250 mg polysorbate 80, 2% benzyl alcohol (preservative), water for injection q.s. Sodium hydroxide and/or hydrochloric acid may be added to adjust pH.

PHARMACOLOGY It has been demonstrated that selenium and tocopherol exert physiological effects and that these effects are intertwined with sulfur metabolism. Additionally, tocopherol appears to have a significant role in the oxidation process, thus suggesting an interrelationship between selenium and tocopherol in overcoming sulfur-induced depletion and restoring normal metabolism. Although oral ingestion of adequate amounts of selenium and tocopherol would seemingly restore normal metabolism, it is apparent that the presence of sulfur and perhaps other factors interfere during the digestive process with the proper utilization of selenium and tocopherol. When selenium and tocopherol are injected, they bypass the digestive process and exert their full metabolic effects promptly on cell metabolism. Anti-inflammatory action has been demonstrated by selenium-tocopherol in the Selye Pouch Technique and experimentally induced polyarthritis study in rats.

INDICATIONS BO-SE (selenium, vitamin E) is recommended for the prevention and treatment of white muscle disease (Selenium-Tocopherol Deficiency) syndrome in calves, lambs, and ewes. Clinical signs are: Stiffness and lameness, diarrhea and unthriftiness, pulmonary distress and/or cardiac arrest. In sows and weanling pigs, as an aid in the prevention and treatment of diseases associated with Selenium-Tocopherol Deficiency such as hepatic necrosis, mulberry heart disease, and white muscle disease. Where known deficiencies of selenium and/or vitamin E exist, it is advisable, from the prevention and control standpoint, to inject the sow during the last week of pregnancy.

CONTRAINDICATIONS DO NOT USE IN PREGNANT EWES. Deaths and abortions have been reported in pregnant ewes injected with this product.

WARNINGS Anaphylactoid reactions, some of which have been fatal, have been reported in animals administered BO-SE Injection. Signs include excitement, sweating, trembling, ataxia, respiratory distress and cardiac dysfunction. Discontinue use 30 days before the treated calves are slaughtered for human consumption. Discontinue use 14 days before the treated lambs, ewes, sows and pigs are slaughtered for human consumption. Selenium-Vitamin E preparations can be toxic when improperly administered.

PRECAUTIONS Selenium-Tocopherol Deficiency (STD) syndrome produces a variety and complexity of symptoms often interfering with a proper diagnosis. Even in selenium deficient areas there are other disease conditions which produce similar clinical signs. It is imperative that all these conditions be carefully considered prior to the treatment of STD syndrome. Serum selenium levels, elevated SGOT, and creatine serum levels may serve as aids in arriving at a diagnosis of STD, when associated with other indices. Selenium is toxic if administered in excess. A fixed dose schedule is therefore important (read the package insert for each selenium-tocopherol product carefully before using).

Important Use only the selenium-tocopherol product recommended for each species. Each formulation is designed for

the species indicated to produce the maximum efficacy and safety.

ADVERSE REACTIONS Reactions, including acute respiratory distress, frothing from the nose and mouth, bloating, severe depression, abortions and deaths have occurred in pregnant ewes. No known treatment exists because at this time the cause of the reaction is unknown.

DOSAGE AND ADMINISTRATION Inject subcutaneously or intramuscularly.

Calves: 2.5-3.75 mL per 100 pounds of body weight depending on the severity of the condition and the geographical area. *Lambs 2 weeks of age and older:* 1 mL per 40 pounds of body weight (minimum, 1 mL). *Ewes:* 2.5 mL per 100 pounds of body weight.

Sows: 1 mL per 40 pounds of body weight. *Weanling pigs:* 1 mL per 40 pounds of body weight (minimum 1 mL). Not for use in newborn pigs.

STORAGE Store between 2° and 30°C (36° and 86°F). Protect from freezing.

HOW SUPPLIED 100 mL sterile, multiple dose vial, NDC 0061-0807-05.

NADA #12-635, Approved by FDA.

October 1998

Made in Germany.

USA006541INV

US 3493

F-22232401

B-22232401

NAC No.: 10470251

MERIAL LTD.

3239 SATELLITE BLVD., DULUTH, GA, 30096

Telephone: 888-637-4251
888-637-4251
Website: www.merial.com

Every effort has been made to ensure the accuracy of the information published. However, it remains the responsibility of the readers to familiarize themselves with the product information contained on the US product label or package insert.

IVOMEC® DRENCH FOR SHEEP

Merial

(ivermectin)

0.08% Solution

Parasiticide

For the Treatment and Control of Worms and Bots of Sheep

NADA 131-392, Approved by the FDA

Consult your veterinarian for assistance in the diagnosis, treatment, and control of parasitism.

FOR ORAL USE IN SHEEP ONLY

PRODUCT DESCRIPTION: IVOMEC Drench for Sheep is a ready-to-use, free-flowing solution of ivermectin. It is formulated to deliver the recommended dose rate of 0.2 mg ivermectin per 1 kg body weight given orally at a volume of 3.0 mL per 26 lb body weight.

INDICATIONS: IVOMEC Drench for Sheep provides treatment and control of adult and fourth-stage larvae of the following parasites: Gastrointestinal Roundworms - *Haemonchus contortus, Ostertagia circumcincta, Trichostrongylus axei, T. colubriformis, Cooperia curticei, Nematodirus spathiger, N. battus, and Oesophagostomum columbianum;* Lungworms - *Dictyocaulus filaria;* and all the larval stages of Nasal Bot - *Oestrus ovis*. It also provides treatment and control of adult forms only of the following Gastrointestinal Roundworms - *Haemonchus placei, Cooperia oncophora, Strongyloides papillosus, Oesophagostomum venulosum, Trichuris ovis,* and *Chabertia ovina.*

DOSAGE AND ADMINISTRATION: IVOMEC Drench for Sheep may be used in any standard drenching equipment or in any equipment which provides a consistent dose volume. IVOMEC Drench for Sheep is administered orally at a dose of 3.0 mL (2.4 mg ivermectin) per 26 lb body weight or 200 mcg ivermectin per kilogram of body weight.

Coughing may be observed in some animals during and for several minutes following drenching.

Residue Information: Do not treat sheep within 11 days of slaughter.

The Material Safety Data Sheet (MSDS) contains more detailed occupational safety information. To report adverse effects in users, to obtain an MSDS, or for assistance call 1-888-637-4251.

PRECAUTIONS: IVOMEC Drench for Sheep has been formulated specifically for use in sheep **only**. This product should not be used in other animal species as severe adverse reactions, including fatalities in dogs, may result.

Keep this and all drugs out of reach of children.

Refrain from smoking and eating when handling. Avoid contact with eyes. Immediately wash hands and any spills on the skin with plenty of soap and water following use.

Restricted Drug - Use only as directed (California).

Environmental Safety: Studies indicate that when ivermectin comes in contact with the soil, it readily and tightly binds to the soil and becomes inactive over time. Free ivermectin may adversely affect fish and certain water-borne organisms on which they feed. Do not permit water runoff from feedlots to enter lakes, streams or ground water. Do not contaminate water by direct application or by the improper disposal of drug containers. Spills should be contained and soaked up with absorbent towels or into loose soil. Gloves should be worn to prevent skin exposure. All the collected materials (contaminated towels and soil), as well as all empty drug containers should be placed in an impervious film (plastic) bag and disposed of by incineration or in an approved landfill.

Merial Limited, a company limited by shares registered in England and Wales (registered number 3332751) with a registered office at PO Box 327, Sandringham House, Sandringham Avenue, Harlow Business Park, Harlow, Essex CM19 5QA, England, and domesticated in Delaware, USA as Merial LLC.

U.S. Pat. 4,199,569

Marketed by Merial Limited, Duluth, GA 300096

IVOMEC and Sheep Head Logo are registered trademarks of Merial.

		Product	
32.46 fl oz (1 qt 0.46 fl oz) 960 mL	83-100 lb Doses	412641	1022-2096-00 1022-2097-00 41264
4 x 32.46 fl oz (1 qt 0.46 fl oz) (960 mL) Plastic Bottles		412641	1040-1294-00
1.268 GALLONS (5.07 QUARTS) 4800 mL	415-100 lb Doses	412681	41268 1022-2100-01 Rev. 06/2006
2 x 1.268 Gallons (5.07 Quarts) 4800 mL Plastic Bottles		412681	

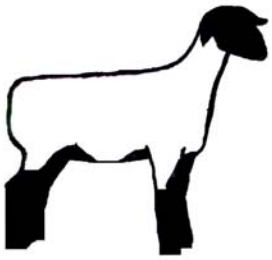
NAC No.: 11110393

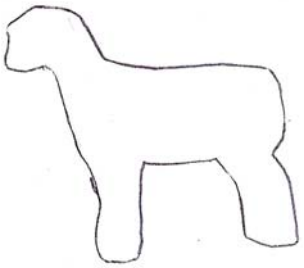
2010 National 4-H Livestock Skillathon Contest
Individual Quality Assurance Exercise – Sheep

Sheep Processing Plan

Contestant Number _____

Document the number of the product to the site of where each product should be administered on the animals below. You may have to show more than one site.





#	Product Name	Route	Location	Dose	Preslaughter Withdrawal	Full Date OK for Harvest
1						
2						
3						
4						
5						
6						
7						

Route includes subcutaneous (SQ), intramuscular (IM), topical (T), orally (O), intradermal (ID)