What is claimed:

1. A method of delivering fluid from a syringe using a pumping device of a flow control apparatus, the method comprising:

locating the flow control apparatus on a support surface;

providing the syringe with a volume of fluid including a total amount of preferred nutrient and an amount of non-preferred nutrient liquid;

mounting the syringe relative to the flow control apparatus whereby the syringe is oriented such that an outlet of the syringe faces upward;

initiating operation of the pumping device to draw the fluid from the syringe for a duration of time; and

delivering at least a portion of the volume of fluid from the syringe such that at least 10% of the total amount of preferred nutrient in the fluid is delivered from the syringe within a first third of the duration of time the pumping device is operated to draw the fluid from the syringe.

2. The method of claim 1, wherein at least 30% of the total amount of preferred nutrient in the fluid is delivered from the syringe within the first third of the duration of time the pumping device is operated to draw the fluid from the syringe.

3. The method of claim 1, wherein at least 44% of the total amount of preferred nutrient in the fluid is delivered from the syringe within the first third of the duration of time the pumping device is operated to draw the fluid from the syringe and the syringe is syringe is oriented substantially orthogonal to the support surface.

4. The method of claim 3, wherein the duration of time the pumping device is operated is 60 minutes.

5. The method of claim 1, wherein at least 60% of the total amount of preferred nutrient in the fluid is delivered from the syringe within a first half of the duration of time the pumping device is operated to draw the fluid from the syringe.

6. The method of claim 5, wherein the syringe is oriented substantially orthogonal to the support surface.

7. The method of claim 5, wherein at least 65% of the total amount of preferred nutrient in the fluid is delivered from the syringe within a first two thirds of the duration of time the pumping device is operated to draw the fluid from the syringe.

8. The method of claim 7, wherein at least 80% of the total amount of preferred nutrient in the fluid is delivered from the syringe within a first five sixths of the duration of time the pumping device is operated to draw the fluid from the syringe.

9. The method of claim 8, wherein the syringe is oriented at least at a 40 degree angle to the support surface.

10. The method of claim 1, wherein at least 50% of the total amount of preferred nutrient in the fluid is delivered from the syringe within a first half of the duration of time the pumping device is operated to draw the fluid from the syringe.

11. The method of claim 10, wherein the syringe is oriented at least at a 25 degree angle to the support surface.

12. The method of claim 1, wherein at least 60% of the total amount of preferred nutrient in the fluid is delivered from the syringe within a first two thirds of the duration of time the pumping device is operated to draw the fluid from the syringe.

13. The method of claim 12, wherein the syringe is oriented at least at a 25 degree angle to the support surface.

14. The method of claim 1, wherein the outlet of the syringe is centered on a barrel of the syringe.

15. The method of claim 1, wherein the syringe is oriented substantially orthogonal to the support surface.

16. The method of claim 1, wherein the syringe is oriented at least at a 25 degree angle to the support surface.

17. The method of claim 1, wherein the fluid comprises breast milk and the preferred nutrient comprises fat.

18. The method of claim 1, wherein delivering at least a portion of the volume of fluid comprises drawing the fluid from the syringe by applying a vacuum pressure to the outlet of the syringe using the flow control apparatus.

19. A flow control apparatus for use with a pump set to deliver fluid from a feeding source through the pump set to a subject, the flow control apparatus comprising:

a pumping device capable of acting on the pump set to produce a fluid flow within the pump set during a feeding cycle; and

a controller in communication with the pumping device for controlling operation of the pumping device in a feeding configuration for producing flow of a fluid in the pump set, the controller including a processor and a memory, the controller being adapted to store in the memory a selected flow rate and a desired fluid volume of the fluid, the controller configured to execute in the processor a feed time compensator to adjust a feed time for operating the pumping device for delivering the fluid through the pump set during the feeding cycle to account for a detected deviation in actual flow rate from the feeding source from the selected flow rate.

20. A support for a flow control apparatus including a pumping system for engaging a pump set mounted on the apparatus, the support comprising:

a base for receiving at least a portion of the flow control apparatus, the base being configured to support the flow control apparatus on a horizontal support surface whereby the flow control apparatus is oriented in a generally horizontal orientation; and

at least one adjustable leg on the base configured to change an angular orientation of the base with respect to a horizontal axis when the base is supported on the horizontal support surface thereby changing an angular orientation of the flow control apparatus when the flow control apparatus is received in the base.