Urine drug testing for Performance Drink
by
Center for Health and Human Performance
Department of Exercise and Nutrition Sciences
University at Buffalo

Abstract

All athletes are concerned with what they consume and if they could contain compounds that may be considered to be illegal by their oversight boards. Performance Drink is being used in many different situations. To determine if the consumption of Performance Drink could have deleterious results in regards to drug testing, seven young healthy subjects consumed either water or an equal volume of Performance Drink. Urine was collected before and after 120 minutes. Outside-blinded testing facilities were used to measure for a standard urine drug panel and an expanded anabolic agent panel. All subjects were drug/anabolic agent free before and after comsumption of both water and Performance Drink. The urine was diluted as expected with both drinks. Performance Drink was not different than water.

Purpose

The aim of this testing was to determine if Performance Drink was different than an equal volume of water in regards to common drugs of abuse and an expanded anabolic agents and steroids.

Protocol

Seven subjects were tested for a standard (9DSP with Ecstasy) drug urine panel. Four of these subjects were also tested for anabolic agents (which included steroid use) with an expanded drug panel (two with water and two Performance drink).

After an overnight fast, subjects arrived in the lab for the drug testing protocol. Subjects received either 500 ml of water or 500 ml of Performance Drink in a double blinded design. Before they consumed the drink and 2 hours after they consumed the drink, the subjects followed the urine collection procedure. Five subjects consumed Performance Drink (shipped to our lab in March of 2007) and two drank water.

Urine collection procedure -Subjects were handed a sample urine cup to take into the restroom stall. They then filled the container with as much urine as possible. After exiting the stall, hand the container to the lab staff member. The specimen temperature was read within 4 minutes and recorded on the container supplied by the independent drug testing lab. The samples were then divided into two aliquots in tubes provided by the testing lab with at least 15 mL and not more than 30 mL. The tubes then had a "tamper-evident seal" placed on the tubes, and the tubes were placed into a "tamper-evident bag".

Samples were sent within one day to the outside testing lab by overnight delivery. All samples were tested for:

	Cutoff value, ng/mL
Cocaine Metabolites	300
Amphetamines (class)	1000
MDMA/MDA(Ecstacy)	500
Barbituates	300
Benzodiazepines	300
Marijuana Metabolite	50
Opiates	2000
Phencyclidine	25
Propoxyphene/metabolite	300
Methadone	300
Creatinine	20 mg/dL
Specific Gravity	1.003 g/mL

Four samples were tested for Anabolic agents and steroids by a DHHL approved lab.

Bolasterone Metabolite
Boldenone Metabolite
Clenbuterol
Clostebol Metabolite
Danazol &/ or Metabolite
DHCMT (Dehydrochloromethyltestosterone) Metabolite
Dihydrotestosterone
Dromostanolone &/or Metabolite
Ethylestrenol/Norethandrolone Metabolite
Fluoxymesterone Metabolite
Formebolone Metabolite
Furazabol Metabolite
Mesterolone &/or Metabolite
Methandienone (Dianabol
Methandrostenolone) Metabolite
Methandriol &/or Metabolite
Methenolone &/or Metabolite
Methyltestosterone Metabolite
Mibolerone Metabolite
Nandrolone/ Norandrostendione/Norandrostendiol Metabolite Oxandrolone &/or Metabolite
Oxymesterone Metabolite
Stanozolol Metabolite
Testosterone/Androstendione/Androstendiol/ DHEA (T/E Ratio > 6)
Trebolone Metabolite
Masking Agents: Probenecid
Epitestosterone (> 200 ng/mL)

Results

The results are easy to interpret since all drugs and anabolic agents were negative. All subjects were free of any agents tested and had no detectable agents after consumption of either water or Performance Drink. All subjects had a drop in urinary creatinine after the two hours from 150 to 80 and 156 to 68 mg/dL (water and PerformanceDrink, respectively). Three of the five subjects that consumed Performance Drink had values below the Cutoff/Expected values. Only one subject had a "dilute specimen" after the fluid consumption with a creatinine below 20 mg/dL and a specific gravity below 1.003 g/mL. This subject had consumed the Performance Drink. It should be noted that this subject also had a low predrink creatinine of 57.4 mg/dL.

Conclusion

All subjects, either before or after the fluid consumption, had negative results for the drug panel and the anabolic panel. Water and Performance Drink were not different in regards to stringent drug testing procedures. Since drug testing for doping in sports are constantly changing, these results must be considered to be valid as of the time of testing with the Performance Drink supplied.