

# INSTRUCTIONS FOR CONDUCTING WRESTLING HYDRATION ASSESSMENT USING THE IHSAA URINE COLOR CHART

THIS IS THE **PRIMARY METHOD** OF  
HYDRATION ASSESSMENT.

HYDRATION ASSESSMENT MUST BE  
PERFORMED IMMEDIATELY **BEFORE** THE  
BODY COMPOSITION ASSESSMENT.

- ◆ **IDENTIFY THE PERSON RESPONSIBLE FOR CONDUCTING THE HYDRATION ASSESSMENT.** This could be a school administrator or another person designated by the school administrator (school nurse, science teacher, PE teacher, etc.), or the assessor conducting the body composition tests. **It is NOT required that registered body composition assessors perform the hydration assessments.** (*WRESTLING COACHES MAY NOT BE INVOLVED IN THE HYDRATION, OR BODY COMPOSITION, ASSESSMENT PROCESS.*)
- ◆ Use only **CLEAR, PLASTIC CUPS** when collecting urine samples.
- ◆ Have each wrestler provide an adequate urine sample so there is approximately 1-2 inches of urine in the cup.
- ◆ **WHILE IT IS NOT NECESSARY TO OBSERVE THE WRESTLER ACTUALLY GIVING THE URINE SAMPLE, IT IS NECESSARY TO VERIFY THAT EACH WRESTLER IS PROVIDING HIS/HER OWN URINE SAMPLE.**  
These suggestions may be helpful:
  - ▶ Closely monitor the area where wrestlers are providing the urine sample
  - ▶ Allow only one wrestler to give a sample at a time
  - ▶ Place blue sanitizer tablets in all stools and urinals
  - ▶ Turn off water to sinks near collection area

- ◆ **Have only the athlete giving the sample handle the cup containing their urine sample**, if at all possible. The person responsible for hydration assessment should always wear protective gloves in the rare event he or shee will be touching cups containing another person's urine.
- ◆ Have the athlete **place the cup containing their urine sample on a WHITE sheet of paper and place the IHSAA Urine Color Chart next to the cup** to compare colors. If the color of the urine is in the “**WELL HYDRATED**” range of **1-5** on the chart the wrestler passes the hydration assessment. If not, he/she fails the hydration assessment using this method.

### **GOOD LIGHTING IS ESSENTIAL TO GETTING ACCURATE RESULTS.**

- ◆ **IF A WRESTLER FAILS THE HYDRATION ASSESSMENT USING THE URINE COLOR CHART**, his/her urine sample may be assessed using a reagent (litmus) strip. **If the wrestler fails the hydration assessment using a litmus strip, or it is not available**, his/her urine sample may be assessed using a refractometer or he/she must wait a minimum of 24 hours before he can be reassessed. **If the wrestler fails the hydration assessment using a refractometer, or it is not available**, he/she has failed the hydration assessment and must wait a minimum of 24 hours before he/she can be reassessed.
- ◆ Have the wrestler discard his/her urine sample in a urinal, or toilet, NOT in the same location where other wrestlers are giving urine samples.
- ◆ Have the wrestler discard his/her collection cup in a trash bag that can be disposed of immediately after all assessments are concluded.
- ◆ Wrestlers who fail the hydration assessment should not be allowed into the area where body composition assessment is taking place. ***It may be a good idea to place a check mark on the back of the right hand of those passing the hydration assessment.***

# INSTRUCTIONS FOR PERFORMING WRESTLING HYDRATION ASSESSMENT USING REAGENT STRIPS FOR URINALYSIS (*LITMUS STRIPS*)

THIS IS A **SECONDARY METHOD** OF HYDRATION ASSESSMENT. IT SHOULD ONLY BE USED IF A WRESTLER FAILS THE ASSESSMENT USING THE URINE COLOR CHART.

HYDRATION ASSESSMENT MUST BE PERFORMED IMMEDIATELY **BEFORE** BODY COMPOSITION ASSESSMENT.

- ◆ IDENTIFY THE PERSON RESPONSIBLE FOR CONDUCTING THE HYDRATION ASSESSMENTS. This could be a school administrator or another person designated by the school administrator (school nurse, science teacher, PE teacher, etc.), or the assessor conducting the body composition tests. **It is NOT required that registered body composition assessors perform the hydration assessments.** (*WRESTLING COACHES MAY NOT BE INVOLVED IN THE HYDRATION, OR BODY COMPOSITION, ASSESSMENT PROCESS.*)
- ◆ Use only **CLEAR, PLASTIC CUPS** when collecting urine samples.
- ◆ Have each wrestler give an adequate urine sample so there is approximately 1-2 inches of urine in the cup.

- ◆ **WHILE IT IS NOT NECESSARY TO OBSERVE THE WRESTLER ACTUALLY GIVING THE URINE SAMPLE, IT IS NECESSARY TO VERIFY THAT EACH WRESTLER IS PROVIDING HIS OWN URINE SAMPLE FOR TESTING.** These suggestions may be helpful:
  - ▶ Closely monitor the area where wrestlers are providing the urine sample
  - ▶ Allow only one wrestler to give a sample at a time
  - ▶ Place blue sanitizer tablets in all stools and urinals
  - ▶ Turn off water to sinks near collection area
  
- ◆ The person responsible for hydration assessment should always wear protective gloves when touching cups containing another person's urine.
  
- ◆ Have the person conducting the hydration assessment **dip the reagent (litmus) strip into the urine sample for 1-2 seconds.** When removing strips from urine, run the entire length of the strip against the rim of the collection cup to remove excess urine.
  
- ◆ **Hold the strip in a horizontal position for 40 seconds and "read" the strip at 45 seconds.** To "read" the strip, hold it close to, **BUT NOT TOUCHING**, the color blocks on the bottle and match the colors carefully. **A urine specific gravity of 1.025, or less, is a passing hydration level.**

**GOOD LIGHTING IS ESSENTIAL TO GETTING ACCURATE RESULTS.**

- ◆ **If the wrestler fails the hydration assessment using a litmus strip, or it is not available,** his urine sample may be assessed using a refractometer. **If the wrestler fails the hydration assessment using a refractometer, or it is not available,** he has failed the hydration assessment and must wait a minimum of 24 hours before he can be reassessed.
  
- ◆ Have the wrestler discard his urine sample in a urinal, or toilet, NOT in the same location where other wrestlers are giving urine samples.
  
- ◆ Have the wrestler discard his collection cup in a trash bag that can be disposed of immediately after all assessments are concluded.
  
- ◆ Wrestlers who fail the hydration assessment should not be allowed into the area where body composition assessment is taking place. ***It may be a good idea to place a check mark on the back of the right hand of those passing the hydration assessment.***

# INSTRUCTIONS FOR PERFORMING WRESTLING HYDRATION ASSESSMENT USING A REFRACTOMETER

THIS IS A **SECONDARY METHOD** OF HYDRATION ASSESSMENT. IT SHOULD ONLY BE USED IF A WRESTLER FAILS THE ASSESSMENT USING THE URINE COLOR CHART **AND** LITMUS STRIP.

**HYDRATION ASSESSMENT MUST BE PERFORMED IMMEDIATELY BEFORE BODY COMPOSITION ASSESSMENT.**

- ◆ **IDENTIFY THE PERSON RESPONSIBLE FOR CONDUCTING THE HYDRATION ASSESSMENT.** This could be a school administrator or another person designated by the school administrator (school nurse, science teacher, PE teacher, etc.), or the assessor conducting the body composition tests. **It is NOT required that registered body composition assessors perform the hydration assessments.** (*WRESTLING COACHES MAY **NOT** BE INVOLVED IN THE HYDRATION, OR BODY COMPOSITION, ASSESSMENT PROCESS.*)
- ◆ Use only **CLEAR, PLASTIC CUPS** when collecting urine samples.
- ◆ Have each wrestler give an adequate urine sample so there is approximately 1-2 inches of urine in the cup.
- ◆ Always wear protective gloves when touching cups containing another person's urine.

- ◆ **WHILE IT IS NOT NECESSARY TO OBSERVE THE WRESTLER ACTUALLY GIVING THE URINE SAMPLE, IT IS NECESSARY TO VERIFY THAT EACH WRESTLER IS PROVIDING HIS OWN URINE SAMPLE FOR TESTING.** These suggestions may be helpful:
  - ▶ Closely monitor the area where wrestlers are providing the urine sample
  - ▶ Allow only one wrestler to give a sample at a time
  - ▶ Place blue sanitizer tablets in all stools and urinals
  - ▶ Turn off water to sinks near collection area
  
- ◆ **Have only the athlete giving the sample handle the cup containing their urine sample**, if at all possible. The person responsible for hydration assessment should always wear protective gloves in the rare event he or shee will be touching cups containing another person's urine.
  
- ◆ Have the person conducting the hydration assessments perform them according the instructions received with the refractometer.
  
- ◆ **If the wrestler fails the hydration assessment using a refractometer, or it is not available AFTER failing the assessment using a litmus strip**, he has failed the hydration assessment and must wait a minimum of 24 hours before he can be reassessed.
  
- ◆ Have the wrestler discard his urine sample in a urinal, or toilet, NOT in the same location where other wrestlers are giving urine samples.
  
- ◆ Have the wrestler discard his collection cup in a trash bag that can be disposed of immediately after all assessments are concluded.
  
- ◆ Wrestlers who fail the hydration assessment should not be allowed into the area where body composition assessment is taking place. ***It may be a good idea to place a check mark on the back of the right hand of those passing the hydration assessment.***

# SCHOOL RESPONSIBILITIES FOR THE HYDRATION ASSESSMENT PROCESS

- ◆ Plastic urine collection cups
- ◆ IHSAA Urine Color Chart - IHSAA provides this chart to each school and body composition assessor
- ◆ **White** paper to set urine collection cups on while verifying hydration status
- ◆ Personnel for assessing each wrestler's hydration status
- ◆ Personnel to verify each wrestler is providing a valid urine sample (*Wrestling coaches may **NOT** be involved in any part of the hydration, or body composition assessment, process.*)

***The body composition assessor may be the person designated as responsible for determining hydration status, and providing the supplies needed for assessing, but it should **NOT** automatically be assumed they will do so. It is reasonable for the body composition assessor to charge a fee for providing the supplies needed for hydration assessment.***

The following information is provided for those schools, or assessors, wishing to use the litmus test as a secondary hydration assessment method.

- ◆ Reagent strips for urinalysis (***litmus strips to assess urine specific gravity / hydration status***) - (i.e. Multistix 8SG, 10SG, Reagent Strips for Urinalysis (or similar litmus strips for assessing urine specific gravity / hydration status) **OR** UriDynamics, Inc. HydraTrend Test Strips for Specific Gravity and pH in Urine **OR** equivalent)

## **Contact information:**

**HydraTrend Test Strips for Specific Gravity and pH in Urine** are available from UriDynamics, Inc.; 6786 Hawthorn Park Drive; Indianapolis, IN 46220. (866) 748-7463 <[www.uridynamics.com](http://www.uridynamics.com)> The cost is approximately \$30 for 50 strips.

**Multistix Reagent Strips for Urinalysis** (*or similar litmus strips for assessing urine specific gravity / hydration status*) are available at most drug stores. The cost is approximately \$90 for 100 strips.