



Robofest 2006

Rule and Game Rule Updates

The official Robofest 2006 Rules (12-21-05 v1.3.1 official version) and Game Competition Challenge: "Toxic Waste Cleanup" (Jan. 4, 2006 v1.3 Official Version) is frozen.

Any changes and revisions will be in this document.

This was updated on March. 23, 2006

Rule Updates

- **Time duration for Team Introduction both for Game and Exhibition teams on Page 4 and Page 8:** the time given is 5 seconds multiplied by number of team members + 5 seconds. For example, if 4 team members, $5 \text{ sec.} \times 4 + 5 = 25$ seconds will be given. During the team introduction the following is expected.
 - Team name and ID
 - Team organization
 - Each member's name and role

Game "Toxic Waste Cleanup" Rule Updates

- You cannot use a sensor that is emitting visible light stronger than that of LEGO light sensor.
- Robots cannot leave (drop off, throw) any object on the playing field.
- MuscleBot's length can be changed to any size after leaving the home base.
- Location of the dotted box on the diagram in figure 1 is unknown.
- The weight of a gate bar will be between 120g and 170g (4.23oz ~ 6oz). *It is strongly recommended to wash hands after touching the gate bar made of pressured-treated wood.*
- MuscleBot must stay on the 2nd board in order to get (partial) points for the mission no. 3, Drop gate bar off the 2nd board.
- 5 extra points will be given when absolutely no human help was given during the entire of a game. (Old rule: if a restart is perfect, then the extra point can be awarded)
- 2 flash extra points will be given to a team which gets the perfect score including unknown missions for the first time. 1 flash extra point will be given to a team which gets the perfect score for the 2nd time.
- Senior Division Hint: the size of gaps will be the same. The rest are unknown. See also FAQ Q9.
- The transparent packaging tape (2" width) will be used only for the toxic area, not for the home base – bridge and bridge – toxic area.

Game "Toxic Waste Cleanup" Rule Clarifications

- Two robots should not work in parallel. Missions cannot be achieved in parallel by two robots at the same time. If a robot is working, then the other robot must be staying at the home base.

- It is OK, actually recommended, for a team player to turn off the MuscleBot after two seconds when it came back to the home base.
- Figure 2 on page 4 shows aluminum foil on the pillars, which is wrong. There is no aluminum foil on the pillars as shown in the following photo.



Game “Toxic Waste Cleanup” Rule FAQ

Q1: Can we use non LEGO sensors? Yes, in general. See the above Rule Updates.

Q2: Can we use active sensor multiplexers for MINDSTORMS? – Yes

Q3: Can we use additional batteries? - Yes

Q4: What if CleanupBot starts to move, when MuscleBot is still working? – This means the failure of automatic start of the CleanupBot. The team may restart from the very beginning; or the team may start CleanupBot manually.

Q5. What is the purpose of 20”x30” black foam board? A team member need hold and move the board during a match so that it remains behind the bottle while the robot is "looking" at a bottle. This is needed because robots in other playing fields may emit strong invisible IR light.

Q6: The gate bar was left on the board but MuscleBot started successfully. Can we remove the bar by hand? – Yes, you must. There is no additional penalty.

Q7. Can we use heterogeneous robots? For example, VEX for MuscleBot and LEGO for CleanupBot. – Yes

Q8. Can my robot go backward? – yes.

Q9. Must senior division robots follow the dashed line? – Not necessarily. You could follow edge of the board, for example.

Q10. Can human player touch MuscleBot to send mail (IR or RF message) to CleanupBot to start manually? – Yes. In this case 2 points are awarded, because it is a manual start.