iGEM 2013 Basic Safety Form

Team name: TMU-Tokyo

Deadline: 30th of August 2013

Submission method: email form to the correct email list for your region:

safety_forms_asia@igem.org
safety_forms_europe@igem.org
safety_forms_north_america@igem.org
safety_forms_latin_america@igem.org

Students can complete this safety form, but it must be read and signed (electronic or hard copy) by your team's faculty advisor. Your advisor must verify the information contained in this form and sign it.

The iGEM Safety Committee must be able to easily reach the advisor with questions or other follow-up communication. If you have made changes to your project (new coding regions or organisms) you must re-submit your safety form before wiki freeze (date TBD).

Key points to remember as you complete the safety assessment process:

- For help in completing questions 1 and 2, you may find it useful to consult the Risk Groups section of the Safety Resources List [2013.igem.org/Safety].
- The iGEM Safety Committee will be reviewing your project. To avoid temporary suspensions, answer these questions completely and accurately.
- The Safety Committee needs to be able to communicate with your faculty advisor about any safety concerns. If we cannot reach your advisor in a reasonable amount of time, you may be subject to restrictions at the Jamboree.
- Your safety page, wiki project page and poster should be consistent with each other. If you change your project, submit an updated Basic Safety Page to the iGEM Safety Committee before the wiki freeze. (Your faculty advisor must also read and sign the updated page.)
- We understand that projects may still be changing at a late date. However, large discrepancies between what you submit on the Basic Safety Page and what you present at the Jamborees may result in restrictions at the Jamboree.

Basic Safety Questions for iGEM 2013

a. Please describe the chassis organism(s) you will be using for this project. If you will be using more than one chassis organism, provide information on each of them:

	Species	Strain no/name	Risk Group	Risk group source link	Disease risk to humans? If so, which disease?
Ex	*E. coli* (K 12)	NEB 10 Beta	1	www.absa.org/riskgroups/bacteriasearch.php?genus=&species=coli	Yes. May cause irritation to skin, eyes, and respiratory tract, may affect kidneys.
1	E.coli (K-12)	MG1655	1	www.atcc.org/products/all/700926.aspx	No
2	Bacteriophage	P1	1	http://www.absa.org/abi.abi/	No
3					
4					
5					
6					
7					
8					

*For additional organisms, please include a spreadsheet in your submission.

2. Highest Risk Group Listed:

1 (●) Greater than 1 ( )

If you answered 1+, please also complete the iGEM Biosafety form part 2 for any organisms in this category.

3. List and describe *all* new or modified coding regions you will be using in your project. (If you use parts from the 2013 iGEM Distribution without modifying them, you do not need to list those parts.)

	Part number.	Where did you get the physical DNA for this part (which lab, synthesis company, etc)	What species does this part originally come from?	What is the Risk Group of the species?	What is the function of this part, in its parent species?
Ex	BBa_C0040	Synthesized, Blue Heron	Acinetobacter baumannii	2	Confers tetracycline resistance

1	BBa_K1015002	Molecular lab, Tokyo Metropolitan University	R100.1 plasmid	1	streptmycin resistance
2	BBa_K1015001	Molecular lab, Tokyo Metripolitan University	Saccharomyces serevisiae	1	site specific recombinase
3	BBa_K1015010	Molecular lab, Tokyo Metripolitan University	Staphylococcus aureus(only plasmid:pI258)	2	ampicilin resistance
4	BBa_K1015004	Invitrogen	E. coli K-12 MG1655	1	DNA-binding transcriptional dual regulator
5	BBa_K1015006	Molecular lab, Tokyo Metripolitan University	E. coli K-12 MG1655(by pSC101 cloning vecter)	1	tetracycline resistance
6	BBa_K1015008	Molecular lab, Tokyo Metripolitan University	E. coli K-12 MG1655	1	repress pLac
7	BBa_K1015009	Molecular lab, Tokyo Metripolitan University	E. coli K-12 MG1655	1	Chloramphenicol resistance
8	BBa_K1015013	Molecular lab, Tokyo Metripolitan University	pACYC177	1	Kanamycin resistanve

*For additional coding regions, please include a spreadsheet in your submission.

4. Do the biological materials used in your lab work pose any of the following risks? Please describe.

a. Risks to the safety and health of team members or others working in the lab?

In this yaer, we use E. coli(K-12) and P1 bacteriophage in our lab and they don't have any risk to the safety and health of them members or thers.

b. Risks to the safety and health of the general public, if released by design or by accident?

E. coli K-12 strain is harmless strain. They are part of the normal flora of the human guts. Also P1 Bacteriophage can't infection human cells. So if they are released, there're no danger to the general public.

c. Risks to the environment, if released by design or by accident?

E. coli K-12 strain and P1 bacteriophage are generally in hte natural world, so if they are released to the ourside, there aren't any danger or harmful effect.

d. Risks to security through malicious misuse by individuals, groups, or countries?

E. coli K-12 strain and P1 bacteriophage aren't dangerous, so we think there isn't danger in particular as far as they just use them. But if they use genetically modified E. coli or P1 bavteriophage may have some risk.

5. If your project moved from a small-scale lab study to become widely used as a commercial/industrial product, what new risks might arise? (Consider the different categories of risks that are listed in parts a-d of the previous question.) Also, what risks might arise if the knowledge you generate or the methods you develop became widely available? (Note: This is meant to be a somewhat open-ended discussion question.)

In our project, we use a lot of drug-resistant genes. So if our project moved from our lab to the outside, there might be the risk that some bacteria which are in the natural world come to have drug resistance because of horizontal transmission.

6. Does your project include any design features to address safety risks? (For example: kill switches, auxotrophic chassis, etc.) Note that including such features is not mandatory to participate in iGEM, but many groups choose to include them.

Our project doesn't have any design which address safety risks, for instance, apotosis system or kill switch. Our parts don't generate any harmful substance, so we think we don't have to design such systems in our project.

7. What safety training have you received (or plan to receive in the future)? Provide a brief description, and a link to your institution's safety training requirements, if available.

We received safety training programs from our instructors and our university's biosafety comittee. We learned about what we should be careful of in a safety aspect during an experoment.For instance, they tought us how to handle dangerous drug or chemical substances. Also, they helped us to make the safe

8. Under what biosafety provisions will / do you work?

a. Please provide a link to your institution biosafety guidelines.

http://www.se.tmu.ac.jp/jimu/1_syomu/201%20kenkyuuanzenrinri/1%20rinri%20kitei.pdf

b. Does your institution have an Institutional Biosafety Committee, or an equivalent group? If yes, have you discussed your project with them? Describe any concerns they raised with your project, and any changes you made to your project plan based on their review.

Yes, there is a biosafety commitee in our university and we've discussed our project with them. They said that there was no point which has a problem in a safety aspect. http://www.biol.se.tmu.ac.jp/nenpo/nenpo2012.pdf

c. Does your country have national biosafety regulations or guidelines? If so, please provide a link to these regulations or guidelines if possible.

http://www.maff.go.jp/j/syouan/nouan/carta/c_data/pdf/law_97.pdf

d. According to the WHO Biosafety Manual, what is the BioSafety Level rating of your lab? (Check the summary table on page 3, and the fuller description that starts on page 9.) If your lab does not fit neatly into category 1, 2, 3, or 4, please describe its safety features [see 2013.igem.org/Safety for help].

BSL2

e. What is the Risk Group of your chassis organism(s), as you stated in question 1? If it does not match the BSL rating of your laboratory, please explain what additional safety measures you are taking.

The risk group of our chassis organism is group1. So our laboratry match the BSL rating.
If our laboratry does'nt match BSL rate, we must take many safety measures.
For example, we must provide ample space for the safe conduct of laboratory work and for cleaning and

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