

**To:** (10)(2e) [(10)(2e)@yahoo.fr]  
**Cc:** (10)(2e) [(10)(2e)@rivm.nl]; (10)(2e) [(10)(2e)@rivm.nl]; (10)(2e) [(10)(2e)@rivm.nl]; (10)(2e) [(10)(2e)@rivm.nl]  
**From:** (10)(2e) [(10)(2e)@rivm.nl]  
**Sent:** Tue 5/5/2020 9:46:52 AM  
**Subject:** RE: Detection of sars-cov2 in wastewater  
**Received:** Tue 5/5/2020 9:46:53 AM  
[Wang et al - 2005 - J Virol Methods Concentration and detection of SARS coronavirus in sewage from Xiao Tang Shan Hospital and the 309th Hospital.pdf](#)

Dear Khadija AKARID,

Thank you very much for your interest.

With respect to your questions:

1/ We and many other have detected SARS-CoV-2 RNA in sewage. It is yet unclear if and to which extent SARS-CoV-2 remains infectious in wastewater. One publication so far has reported that no infectious SARS-CoV-2 could be detected in hospital sewage. See attached publication. In one publication the virus could be cultured from feces and in other studies not.

2/ For SARS-CoV-2 RNA detection by PCR biosafety level 2 suffices. Only SARS-CoV-2 culture requires BSL3 conditions.

With kindest regards,

(10)(2e)

(10)(2e)

(10)(2e)

(10)(2e)

(10)(2e)

(10)(2e)

National Institute for Public Health and the Environment (RIVM) - Centre for Infectious Disease Control

P.O. Box 1, 3720 BA Bilthoven  
 The Netherlands

tel +31 30 (10)(2e)

fax +31 30 (10)(2e)

mail: (10)(2e)@rivm.nl

rivm - de zorg voor morgen begint vandaag

---

**From:** (10)(2e) <(10)(2e)@yahoo.fr>  
**Sent:** dinsdag 5 mei 2020 02:13  
**To:** (10)(2e) <(10)(2e)@rivm.nl>  
**Subject:** Fw: Detection of sars-cov2 in wastewater

Dear Doctor de Roda Husman,

I am a professor of immunology at Hassan II University in Casablanca (Morocco). I am sending you this email to solicit you as an expert in research on wastewater and I am particularly interested in your last publication in the Lancet on the Sars Cov 2 virus detection in wastewater.

Considering your expertise in this area, I would have a few questions please:

- 1) Does the virus stay alive in wastewater ?
- 2) Should we take precautions and work in P3 laboratory when looking for the virus detection by PCR ?

Thank you very much for your help and I am looking forward to hearing back from you.

Best regards,  
K. Akarid

*Khadija AKARID, PhD*  
*Professeur d'Immunologie*  
*Responsable/Equipe de Génétique Moléculaire et Immunophysio-pathologie*  
*Laboratoire "Santé & Environnement"*  
*Faculté des Sciences Ain chock*  
*Université Hassan II de Casablanca, Maroc.*  
Tél: +212 (10)(2e)  
Mail: (10)(2e)@yahoo.fr