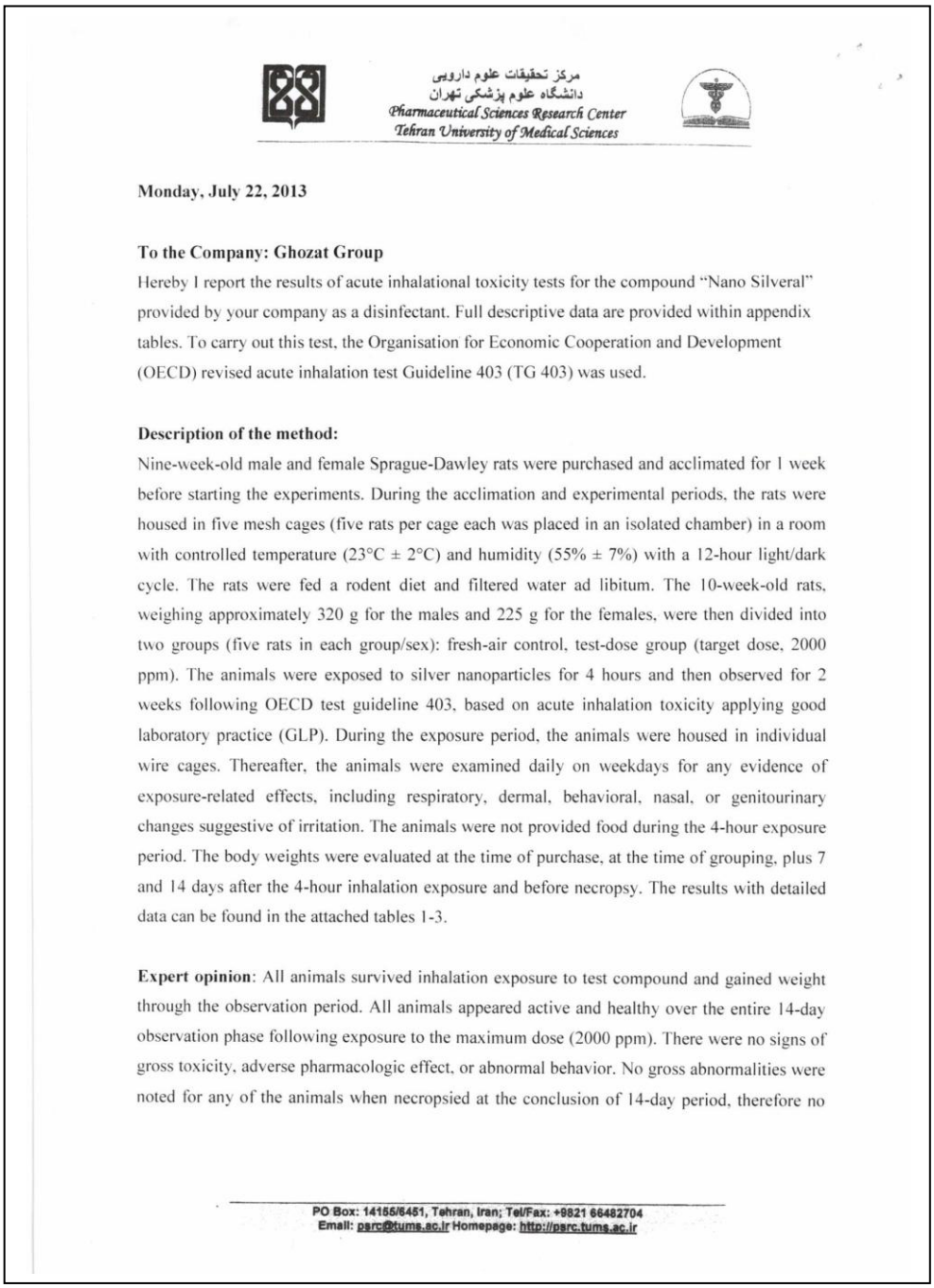
آزمایش عدم سمیت حاد استنشاقی محلول نانوسیلورال

در مرکز تحقیقات علوم داروئی دانشگاه علوم پزشکی تهران

طی انجام آزمایش عدم سمیت حاد استنشاقی در دانشگاه علوم پزشکی دانشگاه تهران ، محلول نانوسیلورال با غلظت خالص ۲۰۰۰ دو هزار ppm بصورت اسپری بلامانع بوده و هیچگونه عوارض سمیت مشاهده نشده است .

لازم بذکر است که حداکثر مقدار غلظت جهت مصارف ضدعفونی تنها ۱۰۰ صد ppm میباشد ، یعنی بیش از ۲۰ برابر این غلظت را میتوان بدون هیچ مشکل سمیتی از محلول نانوسیلورال استفاده نمود .



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Monday, July 22, 2013

To the Company: Ghozat Group

Hereby I report the results of acute inhalational toxicity tests for the compound "Nano Silveral" provided by your company as a disinfectant. Full descriptive data are provided within appendix tables. To carry out this test, the Organisation for Economic Cooperation and Development (OECD) revised acute inhalation test Guideline 403 (TG 403) was used.

Description of the method:

Nine-week-old male and female Sprague-Dawley rats were purchased and acclimated for 1 week before starting the experiments. During the acclimation and experimental periods, the rats were housed in five mesh cages (five rats per cage each was placed in an isolated chamber) in a room with controlled temperature (23°C ± 2°C) and humidity (55% ± 7%) with a 12-hour light/dark cycle. The rats were fed a rodent diet and filtered water ad libitum. The 10-week-old rats, weighing approximately 320 g for the males and 225 g for the females, were then divided into two groups (five rats in each group/sex): fresh-air control, test-dose group (target dose, 2000 ppm). The animals were exposed to silver nanoparticles for 4 hours and then observed for 2 weeks following OECD test guideline 403, based on acute inhalation toxicity applying good laboratory practice (GLP). During the exposure period, the animals were housed in individual wire cages. Thereafter, the animals were examined daily on weekdays for any evidence of exposure-related effects, including respiratory, dermal, behavioral, nasal, or genitourinary changes suggestive of irritation. The animals were not provided food during the 4-hour exposure period. The body weights were evaluated at the time of purchase, at the time of grouping, plus 7 and 14 days after the 4-hour inhalation exposure and before necropsy. The results with detailed data can be found in the attached tables 1-3.

Expert opinion: All animals survived inhalation exposure to test compound and gained weight through the observation period. All animals appeared active and healthy over the entire 14-day observation phase following exposure to the maximum dose (2000 ppm). There were no signs of gross toxicity, adverse pharmacologic effect, or abnormal behavior. No gross abnormalities were noted for any of the animals when necropsied at the conclusion of 14-day period, therefore no

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further tests were examined. According to OECD guidelines, this compound is categorized in the non-toxic group. Further tests by longer duration of exposure can be done if there would be case reports in future.

Reference: OECD (2008) Revised Test Guideline 403. OECD Guideline for Testing of Chemicals. Acute Inhalation Toxicity Testing.

Acknowledgment: This letter is attached with further 3 pages containing 6 tables. This study was accomplished upon request of Ghozat Group Company who financially supported the study.

Approved by Mohammad Abdollahi
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