IARC Monographs on the Evaluation of Carcinogenic Risks to Humans

VOLUME 85
Betel-quid and Areca-nut Chewing and Some Areca-nut-derived Nitrosamines

LYON, FRANCE
2004
This publication represents the views and expert opinions of an IARC Working Group on the Evaluation of Carcinogenic Risks to Humans, which met in Lyon, 11–18 June 2003.
IARC MONOGRAPHS

In 1969, the International Agency for Research on Cancer (IARC) initiated a programme on the evaluation of the carcinogenic risk of chemicals to humans involving the production of critically evaluated monographs on individual chemicals. The programme was subsequently expanded to include evaluations of carcinogenic risks associated with exposures to complex mixtures, life-style factors and biological and physical agents, as well as those in specific occupations.

The objective of the programme is to elaborate and publish in the form of monographs critical reviews of data on carcinogenicity for agents to which humans are known to be exposed and on specific exposure situations; to evaluate these data in terms of human risk with the help of international working groups of experts in chemical carcinogenesis and related fields; and to indicate where additional research efforts are needed.

The lists of IARC evaluations are regularly updated and are available on Internet: http://monographs.iarc.fr/

This project was supported by Cooperative Agreement 5 UO1 CA33193 awarded by the United States National Cancer Institute, Department of Health and Human Services. Additional support has been provided since 1993 by the United States National Institute of Environmental Health Sciences.

©International Agency for Research on Cancer, 2004

Distributed by IARCPress (Fax: +33 4 72 73 83 02; E-mail: press@iarc.fr)
and by the World Health Organization Marketing and Dissemination, 1211 Geneva 27
(Fax: +41 22 791 4857; E-mail: publications@who.int)
Publications of the World Health Organization enjoy copyright protection in accordance with the provisions of Protocol 2 of the Universal Copyright Convention.
All rights reserved. Application for rights of reproduction or translation, in part or in toto, should be made to the International Agency for Research on Cancer.

IARC Library Cataloguing in Publication Data
Betel-quid and areca-nut chewing and some areca-nut-derived nitrosamines /
IARC Working Group on the Evaluation of Carcinogenic Risks to Humans
(2003 : Lyon, France)
(IARC monographs on the evaluation of carcinogenic risks to humans ; v. 85)
ISBN 92 832 1285 1 (NLM Classification: W1)
ISSN 1017-1606

PRINTED IN FRANCE
1 Betel quid stand at a Phnom Penh local market (provided by Peter Reichart)
2 Betel quid, unfolded
3 Betel quid, folded
4 Gutka, as commercially manufactured and sold in Southeast Asia
5 Pan masala, as commercially manufactured and sold in Southeast Asia
6 Lao-hwa areca nuts, as sold in Taiwan, China (provided by Peter Reichart)
7 Pan masala, as served in restaurants after the meal