

WORLD HEALTH ORGANIZATION
INTERNATIONAL AGENCY FOR RESEARCH ON CANCER



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

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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

2004

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/>

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- 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