Table 1. (Continued) Anticoccidial drugs used in the poultry industry.

Chemical group (approx. dose, ppm[a]); relevant information	**Non proprietary name**, *brand name (manufacturer, company); other information	**Characteristics**[b] and miscellaneous comments
4-Hydroxyquinolines *(82) [c3]1967 **(20–40) [c4]1970 ***(110)[c5]1974	[c3]**buquinolate** *Bonaid (Norwich), discontinued [c4]**decoquinate** **Deccox (Rhône Poulenc, Rorer; (methyl benzoquate) *Statyl (earlier ICI), discontinued [c5]**methyl benzoquate** (8.35 parts) + **meticlorpindol** (100 parts) ***Lerbek (now Merial)	*buquinolate* was "commercially dead" within 6 months (sudden and dramatic appearance of drug resistance); hydroxyquinolines are almost entirely coccidiostatic against sporozoites and trophozoites of all *Eimeria* spp. in chickens (see also meticlorpindol); as single compounds they have only limited success (also **methyl benzoquate** at 10ppm and higher doses) as a result of serious and immediate drug resistance in the field; it has been shown that methylbenzoquate-resistant *Eimeria* spp. strains cannot be controlled by the drug at any level. **decoquinate** is licensed for use in broiler chickens and replacement chickens (approval for treatment and prophylaxis of coccidiosis in lambs and calves may be restricted to some countries); **methyl benzoquate** plus **meticlorpindol** exhibit synergistic activity: the combination is licensed for use in broilers, replacement chickens and turkeys; it is used mainly in shuttle (rotation) programs; target of mode of action of this series is energy metabolism: compounds block electron transport down the cytochrome chain in the mitochondria of coccidia and hence inhibit NADH oxidation and ATP synthesis as well
NITROBENZAMIDES		
*(62.5–125) [c6a]1960	[c6a]**dinitolmide** ***Zoalene** (earlier Dow chemical) **Zoamix (Alpharma, USA)	is licensed for use in broiler chickens and poultry; the drug arrests development of first- and second-generation schizonts but would not interfere with development of immunity; it is completely protective against *E. tenella* and *E. necatrix* infections but has limited activity against *E. acervulina*; to extend activity or growth promotion, drug has also been combined with sulfanitran or roxarsone; it may chiefly be used in breeder or replacement chickens (up to 16 weeks of age); mode of action is unknown
(250) [c6b]1958	[c6b]**nitromide** *Unistat (Salsbury)	first nitrobenzamide to be sold was nitromide; to extend its activity spectrum, drug was combined with sulfanitran and roxarsone (= *Unistat); it has the same biological properties as dinitolmide (see above)
(250) c6c1965	[c6c] **aklomide** *Aklomix (Salsbury)	Marketing of aklomide has been discontinued; it had no advantage over nitromide or dinitolmide
Organic arsenicals *(50) [c7a] 1946 **(400) ***(20) [c7b] 1949 [§]not licensed for prevention of coccidiosis in poultry or other animals under European Commission Guidelines (additives in feeding stuffs)	[c7a]**roxarsone** *3 Nitro(Salsbury, Rhône Poulenc) [c7b]arsanilic acid **Pro-Gen (Abbott) ***arsenosobenzene	primary application of arsenicals has been growth promotion; roxarsone should have some activity against *E. tenella* and *E. brunetti* used alone or in combination with nitrobenzamides; arsenicals were almost completely eliminated from the market by environmental problems