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<p>(21) International Application Number: PCT/NO97/00347</p> <p>(22) International Filing Date: 18 December 1997 (18.12.97)</p> <p>(30) Priority Data: 9626608.5 20 December 1996 (20.12.96) GB</p> <p>(71) Applicant (for all designated States except US): NORSK HYDRO ASA [NO/NO]; N-0240 Oslo (NO).</p> <p>(72) Inventor; and (75) Inventor/Applicant (for US only): DE CASTRO, Fernando, Basile [BR/GB]; 132 Greenburn Road, Bucksborn, Aberdeen AB21 9EP (GB).</p> <p>(74) Agent: SUNDNES, Arne; Norsk Hydro ASA, N-0240 Oslo (NO).</p>		<p>(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).</p> <p><b>Published</b> <i>With international search report.</i></p>
<p>(54) Title: CONTROLLED RELEASE UREA PRODUCT, METHOD FOR ITS PRODUCTION AND USE OF SAID PRODUCT AS FEED SUPPLEMENT</p> <p>(57) Abstract</p> <p>The present invention relates to a controlled release urea product which primarily consists of urea entrapped or bonded in a lignin matrix forming a lignin-urea (LU) product, a method for preparation of said LU product and use of said LU product as a slow release urea feed supplement in ruminant feed. The ruminant feed comprises 0.5-5 weight % diet urea as a lignin-urea (LU) product. The preferred ratio lignin:urea in the LU product is 75-15:25-85. Said LU product may contain additives such as rosin, starch, lanolin, polyethylene glycol, glycine which can be mixed with both urea and lignin as well as have coating agent, e.g. lanolin or rosin. The controlled release urea product can be prepared by mixing lignin with melted urea at 155-170 °C and at a retention time of 10-0.5 minutes. The resulting lignin-urea product can be particulated by prilling, granulation, crushing or milling to desired size.</p>		