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CONSULTANTS TO THE PHARMACEUTICAL AND ALLIED INDUSTRIES

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September 26, 2001

**OVERNIGHT DOCUMENT 9/26/01**

Dockets Management Branch  
Food and Drug Administration  
Department of Health and Human Services  
5630 Fishers Lane, Room 1061  
Rockville, MD 20852

**CITIZEN PETITION**

The undersigned, on behalf of a client, submits this petition in quadruplicate pursuant to Section 505(j)(2)(C) of the Federal Food, Drug, and Cosmetic Act ("the FDC Act"), 21 U.S.C. § 355(j)(2)(C), and 21 C.F.R. §§ 10.20, 10.30, and 314.93 to request that the Commissioner of Food and Drugs make a determination that an Abbreviated New Drug Application (ANDA) may be submitted for Hydrocodone Bitartrate and Acetaminophen Tablets, USP 10 mg / 300 mg.

**A. Action Requested**

The petitioner requests that the Commissioner of Food and Drugs make a determination that a Hydrocodone Bitartrate and Acetaminophen Tablets, 10 mg / 300 mg combination drug product is suitable for submission as an ANDA. The reference-listed drug product upon which this petition is based is NORCO® (Hydrocodone Bitartrate and Acetaminophen Tablet, 10 mg / 325 mg) manufactured by Watson Laboratories. Therefore, this petition requests a change in the strength of one of the active ingredients (Acetaminophen) from 325 mg to 300 mg per tablet. Because this request involves a change in strength, the provisions of the Pediatric Final Rule are not applicable to the evaluation of this petition.

**B. Statement of Grounds**

Section 505(j)(2)(C) of the Federal Food, Drug, and Cosmetic Act provides for the submission of an ANDA for a new drug that differs in strength from a listed drug, provided that the FDA has approved a petition seeking permission to file such an application. This petition requests a change in the strength of one of the active ingredients, Acetaminophen, from 325 mg per tablet which is found in the listed drug, NORCO®, manufactured by Watson Laboratories, to 300 mg per tablet. The listing of NORCO® (Hydrocodone Bitartrate and Acetaminophen Tablet, 10 mg / 325 mg) is on Page 3-5 of the 21<sup>st</sup> Edition of the Approved Drug Products with Therapeutic Equivalence Evaluations (commonly referred to as "The Orange Book"). Please see Attachment A.

According to the labeling of the reference-listed drug product, the usual dosage is "one tablet every four to six hours, as needed for pain. The total daily dose should not exceed 6 tablets". The approved package insert for NORCO® Tablets, is included in Attachment C. The dosage for the proposed product is "one tablet every four to six hours as needed for pain. The total daily dose should not exceed 6 tablets." This dosage is consistent with the dosage listed in the approved NORCO® package insert. Acetaminophen 300 mg has been approved by the FDA as a safe and effective dose of that component in other combination products, such as Acetaminophen and Codeine Phosphate. Please see Attachment B.

In summary, the proposed strength change of the non-narcotic component from that of the reference-listed drug will not affect the product's safety or efficacy. The indication remains unchanged, and the proposed dosing is consistent with dosing recommendations in the labeling of the approved reference-listed drug product's labeling and is supported by other FDA approved doses of 300 mg of the

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Acetaminophen component in other approved products. Therefore, the Agency should conclude that clinical investigations are not necessary to demonstrate the proposed products safety or effectiveness.

The proposed labeling for Hydrocodone Bitartrate and Acetaminophen Tablets USP 10 mg / 300 mg is included as Attachment D. Labeling for the proposed product is consistent with the approved labeling for the reference-listed Hydrocodone Bitartrate and Acetaminophen Tablet combination product upon which this petition is based.

For the aforementioned reasons, the undersigned requests that the Commissioner grant this petition and authorize submission of an ANDA for Hydrocodone Bitartrate and Acetaminophen Tablets, 10 mg / 300 mg.

### **C. Environmental Impact**

According to 21 C.F.R. § 25.31(a), this petition qualifies for a categorical exemption from the requirement to submit an environmental assessment.

### **D. Economic impact Statement**

According to 21 C.F.R. § 10.30(b), the petitioner will, upon request by the Commissioner, submit economic impact information.

### **E. Certification**

The undersigned certifies, that, to the best knowledge and belief of the undersigned, this petition includes all information and views on which the petition relies, and that it includes representative data and information known to the petitioner, which are unfavorable to the petition.

Respectfully submitted,



Robert W. Pollock  
Vice President  
Lachman Consultant Services, Inc  
1600 Stewart Avenue, Westbury, NY 11590

RWP/pk

#### Attachments:

- A. Page 3-5, Approved Drug Products with Therapeutic Equivalence Evaluations, 21<sup>st</sup> Edition
- B. Page 3-3, Approved Drug Products with Therapeutic Equivalence Evaluations, 21<sup>st</sup> Edition
- C. NORCO® (Hydrocodone Bitartrate and Acetaminophen) Tablets, 10 mg / 325 mg Insert Labeling
- D. Draft Insert Labeling for Proposed Drug Product

cc: G. Davis (OGD)  
L. Lachman (LCS)

**MFP1269**



# **ATTACHMENT A**

**APPROVED DRUG PRODUCTS**  
**with**  
**THERAPEUTIC EQUIVALENCE EVALUATIONS**

The products in this list have been approved under section 505 of the Federal Food, Drug, and Cosmetic Act. This volume is current through December 31, 2000.

**21<sup>ST</sup> EDITION**



**U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES**  
PUBLIC HEALTH SERVICE  
FOOD AND DRUG ADMINISTRATION  
CENTER FOR DRUG EVALUATION AND RESEARCH  
OFFICE OF INFORMATION TECHNOLOGY  
DIVISION OF DATA MANAGEMENT AND SERVICES

**2001**

PRESCRIPTION DRUG PRODUCT LIST

3-5

ACETAMINOPHEN; HYDROCODONE BITARTRATE

TABLET; ORAL  
HYDROCODONE BITARTRATE AND ACETAMINOPHEN  
AA + MIKART 500MG; 7.5MG  
AA + 650MG; 7.5MG  
AA + 650MG; 10MG  
AA PEACHTREE 500MG; 10MG  
AA UCB 650MG; 7.5MG  
AA VINTAGE PHARMS 325MG; 10MG  
AA 500MG; 2.5MG  
AA 500MG; 5MG  
AA 500MG; 5MG  
AA 500MG; 7.5MG  
AA 500MG; 10MG  
AA 650MG; 7.5MG  
AA 650MG; 10MG  
AA 660MG; 10MG  
AA 750MG; 7.5MG  
AA + WATSON LABS 325MG; 7.5MG  
AA 325MG; 10MG  
AA 500MG; 2.5MG  
AA 500MG; 2.5MG  
AA 500MG; 5MG  
AA 500MG; 5MG  
AA 500MG; 7.5MG

NE9699 001  
 AUG 25, 1989  
 N89689 001  
 JUN 29, 1988  
 N81223 001  
 MAY 29, 1992  
 N40210 001  
 AUG 13, 1997  
 N40134 001  
 NOV 21, 1996  
 N40355 001  
 MAY 31, 2000  
 N40144 002  
 APR 25, 1997  
 N89831 001  
 SEP 07, 1989  
 NS9971 001  
 DEC 02, 1988  
 N40144 001  
 FEB 22, 1996  
 N40356 001  
 MAY 31, 2000  
 N40155 001  
 APR 14, 1997  
 N40143 001  
 FEB 22, 1996  
 N40358 001  
 MAY 31, 2000  
 N40157 001  
 APR 12, 1996  
 N40248 001  
 APR 28, 2000  
 N40248 002  
 APR 28, 2000  
 N40123 003  
 MAR 04, 1996  
 N81079 001  
 AUG 30, 1991  
 N40122 001  
 MAR 04, 1996  
 N89883 001  
 DEC 01, 1988  
 N40123 004  
 MAR 04, 1996

ACETAMINOPHEN; HYDROCODONE BITARTRATE

TABLET; ORAL  
HYDROCODONE BITARTRATE AND ACETAMINOPHEN  
AA WATSON LABS 500MG; 7.5MG  
AA 500MG; 10MG  
AA 650MG; 7.5MG  
AA 650MG; 7.5MG  
AA 650MG; 10MG  
AA 650MG; 10MG  
AA 660MG; 10MG  
AA 750MG; 7.5MG  
AA 750MG; 7.5MG  
AA ZENITH GOLDLINE 500MG; 5MG  
AA LORTAB MALLINCKRODT 500MG; 5MG  
AA + UCB 325MG; 5MG  
AA + 500MG; 10MG  
AA NORCO + WATSON LABS 325MG; 10MG  
AA VICODIN + KNOLL PHARM 500MG; 5MG  
AA VICODIN ES + KNOLL PHARM 750MG; 7.5MG  
AA VICODIN HP KNOLL PHARM 660MG; 10MG

N81080 001  
 AUG 30, 1991  
 N40148 002  
 FEB 14, 1997  
 N40094 001  
 SEP 29, 1995  
 N40123 001  
 MAR 04, 1996  
 N40094 002  
 SEP 29, 1995  
 N40123 002  
 MAR 04, 1996  
 N40094 003  
 AUG 08, 2000  
 N40122 002  
 MAR 04, 1996  
 N81083 '0.01:  
 AUG 30, 1991  
 N89696 001  
 APR 21, 1988  
 N87722 001,  
 JUL 09, 1982.  
 N40099 001  
 JUN 25, 1997  
 N40100 0 0 1  
 JAN 26, 1996  
 N40148 001  
 FEB 14, 1997  
 N88058 001  
 JAN 07, 1983  
 N89736 001  
 DEC 09, 1988  
 N40117 001  
 SEP 23, 1996

**ATTACHMENT B**

# **APPROVED DRUG PRODUCTS with THERAPEUTIC EQUIVALENCE EVALUATIONS**

The products in this list have been approved under section 505 of the Federal Food, Drug, and Cosmetic Act. This volume is current through December 31, 2000.

## **21<sup>ST</sup> EDITION**



**U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES  
PUBLIC HEALTH SERVICE  
FOOD AND DRUG ADMINISTRATION  
CENTER FOR DRUG EVALUATION AND RESEARCH  
OFFICE OF INFORMATION TECHNOLOGY  
DIVISION OF DATA MANAGEMENT AND SERVICES**

**2001**

PREScription DRUG PRODUCT LIST

3-3

ACETAMINOPHEN; CODEINE PHOSPHATE

TABLET; ORAL

<u>ACETAMINOPHEN AND CODEINE PHOSPHATE</u>		
<u>AA</u>	DURAMED	<u>300MG; 15MG</u>
<u>AA</u>		<u>300MG; 30MG</u>
<u>AA</u>		<u>300MG; 60MG</u>
<u>AA</u>	GENEVA PHARMS	<u>300MG; 30MG</u>
<u>AA</u>		<u>300MG; 60MG</u>
<u>AA</u>	MIKART	<u>300MG; 30MG</u>
+		650MG; 30MG
+		650MG; 60MG
<u>AA</u>	MUTUAL PHARM	<u>300MG; 15MG</u>
<u>AA</u>		<u>300MG; 30MG</u>
<u>AA</u>		<u>300MG; 60MG</u>
<u>AA</u>	PHARMERAL	<u>300MG; 30MG</u>
<u>AA</u>	PUREPAC PHARM	<u>300MG; 30MG</u>
<u>AA</u>		<u>300MG; 60MG</u>
<u>AA</u>	TEVA	<u>300MG; 15MG</u>
<u>AA</u>		<u>300MG; 30MG</u>
<u>AA</u>		<u>300MG; 60MG</u>
<u>AA</u>	VINTAGE PHARMS	<u>300MG; 15MG</u>
<u>AA</u>		<u>300MG; 30MG</u>
<u>AA</u>		<u>300MG; 60MG</u>
<u>AA</u>	WATSON LABS	<u>300MG; 15MG</u>
<u>AA</u>		<u>300MG; 30MG</u>
<u>AA</u>		<u>300MG; 60MG</u>
<u>AA</u>	ZENITH GOLDLINE	<u>300MG; 60MG</u>

ACETAMINOPHEN; CODEINE PHOSPHATE

TABLET; ORAL

<u>ACETAMINOPHEN AND CODEINE PHOSPHATE #2</u>			
<u>AA</u>	SUPERPHARM	<u>300MG; 15MG</u>	N89183 001
			OCT 18, 1985
<u>ACETAMINOPHEN W/ CODEINE NO. 3</u>			
<u>AA</u>	ROXANE	<u>300MG; 30MG</u>	N84656 001
<u>ACETAMINOPHEN W/ CODEINE PHOSPHATE #3</u>			
<u>AA</u>	ZENITH GOLDLINE	<u>300MG; 30MG</u>	N85868 001
	CAPITAL WITH CODEINE		
	+ CARNRICK	325MG; 30MG	N83643 001
	TYLENOL W/ CODEINE NO. 1		
	+ JOHNSON RW	300MG; 7.5MG	N85055 001
<u>AA</u>	<u>TYLENOL W/ CODEINE NO. 2</u>		
	+ JOHNSON RW	<u>300MG; 15MG</u>	N85055 002
<u>AA</u>	<u>TYLENOL W/ CODEINE NO. 3</u>		
	+ JOHNSON RW	<u>300MG; 30MG</u>	N85055 003
<u>AA</u>	<u>TYLENOL W/ CODEINE NO. 4</u>		
	+ JOHNSON RW	<u>300MG; 60MG</u>	185055 004
<u>ACETAMINOPHEN; HYDROCODONE BITARTRATE</u>			
CAPSULE; ORAL			
<u>ACETAMINOPHEN AND HYDROCODONE BITARTRATE</u>			
<u>AA</u>	CENT PHARMS	<u>500MG; 5MG</u>	N88898 001
			MAR 27, 1985
<u>AA</u>	ALLAY		
	ZENITH GOLDLINE	<u>500MG; 5MG</u>	189907 001
			JAN 13, 1989
<u>AA</u>	<u>HYDROCET</u>		
	MALLINCKRODT	-500MG; 5MG	189006 001
			AUG 09, 1985
<u>HYDROCODONE BITARTRATE AND ACETAMINOPHEN</u>			
<u>AA</u>	MALLINCKRODT	<u>500MG; 5MG</u>	N88956 001
			JUL 19, 1985
<u>AA</u>	MIKART	<u>500MG; 5MG</u>	N81067 001
			NOV 30, 1989
<u>AA</u>		<u>500MG; 5MG</u>	N81068 001
<u>AA</u>		<u>500MG; 5MG</u>	NOV 30, 1989
	500MG;	5MG	N81069 001
			NOV 30, 1989
<u>AA</u>		<u>500MG; 5MG</u>	N81070 001
<u>AA</u>		<u>500MG; 5MG</u>	NOV 30, 1989
			N89008 001
			FEB 21, 1986
<u>AA</u>	<u>LORCET-HD</u>		
	+ MALLINCKRODT	500MG;	5MG
			N87336 001
			JUL 08, 1982



**ATTACHMENT C**

6

**NORCO®**  
(Hydrocodone Bitartrate  
and Acetaminophen  
Tablets, USP)

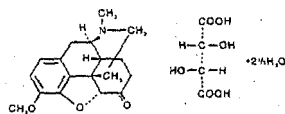


Rx only

**DESCRIPTION**

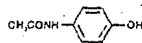
NORCO® (Hydrocodone bitartrate and acetaminophen) is supplied in tablet form for oral administration.

Hydrocodone bitartrate is an opioid analgesic and antitussive and occurs as fine, white crystals of as a crystalline powder. It is affected by light. The chemical name is 4,5- $\alpha$ -epoxy-3-methoxy-17-methylmorphinan-6-one tartrate (1:1) hydrate (2:5). It has the following structural formula:



$C_{18}H_{21}NO_3 \cdot C_4H_8O_6 \cdot 2\frac{1}{2}H_2O$  M. W. = 494.50

Acetaminophen, 4-hydroxyacetanilide, a slightly bitter, white, odorless, crystalline powder, is a non-opiate, non-salicylate analgesic and antipyretic. It has the following structural formula:



$C_9H_9NO_2$  M. w. = 151.17

NORCO®, for oral administration is available in the following strengths:

	<u>Hydrocodone Bitartrate</u>	<u>Acetaminophen</u>
NORCO® 7.5/325	7.5 mg	325 mg
NORCO® 10/325	10 mg	325 mg

In addition, each tablet contains the following inactive ingredients: croscarmellose sodium, crospovidone, magnesium stearate, microcrystalline cellulose, pregelatinized starch, povidone, and stearic acid; the 7.5 mg/325 mg tablets include FD&C Yellow #6 Aluminum Lake, the 10 mg/325 mg tablets include D&C Yellow #10 Aluminum Lake.

**CLINICAL PHARMACOLOGY**

hydrocodone is a semisynthetic narcotic analgesic and antitussive with multiple actions qualitatively similar to those of codeine. Most of these involve the central nervous system and smooth muscle. The precise mechanism of action of hydrocodone and other opiates is not known, although it is believed to relate to the existence of opiate receptors in the central nervous system. In addition to analgesia, narcotics may produce drowsiness, changes in mood and mental clouding.

The analgesic action of acetaminophen involves peripheral influences, but the specific mechanism is as yet undetermined. Antipyretic activity is mediated through hypothalamic heat regulating centers. Acetaminophen inhibits prostaglandin synthetase. Therapeutic doses of acetaminophen have negligible effects on the cardiovascular or respiratory systems; however, toxic doses may cause circulatory failure and rapid, shallow breathing.

Pharmacokinetics: The behavior of the individual components is described below.

**Hydrocodone:** following a 10 mg oral dose of hydrocodone administered to five adult male subjects, the mean peak concentration was  $23.6 \pm 5.2$  ng/mL. Maximum serum levels were achieved at  $1.3 \pm 0.3$  hours and the half-life was determined to be  $3.8 \pm 0.3$  hours. Hydrocodone exhibits a complex pattern of metabolism including O-demethylation, N-demethylation and 6-ketoreduction to the corresponding 6- $\alpha$ - and 6- $\beta$ -hydroxymetabolites. See OVERDOSAGE for toxicity information.

**Acetaminophen:** Acetaminophen is rapidly absorbed from the gastrointestinal tract and distributed throughout most body tissues. The plasma half-life is 1.25 to 3 hours, may be increased by liver damage and following overdose. Elimination of acetaminophen is principally by liver metabolism (conjugation) and subsequent excretion of metabolites. Approximately 85% of an oral dose appears in the urine within 24 hours of administration, most as the glucuronide conjugate, with small amount of other conjugates and unchanged drug. See OVERDOSAGE for toxicity information.

**INDICATIONS AND USAGE**

NORCO® is indicated for the relief of moderate to moderately severe pain.

**CONTRAINDICATIONS**

NORCO® should not be administered to patients who have previously exhibited hypersensitivity to hydrocodone or acetaminophen.

**WARNINGS**

**Respiratory Depression:** At high doses or in sensitive patients, hydrocodone may produce dose-related respiratory depression by acting directly on the brain stem respiratory center. Hydrocodone also affects the center that controls respiratory rhythm and may produce irregular and periodic breathing.

**Head Injury and Increased Intracranial Pressure:** The respiratory depressant effects of narcotics and their capacity to elevate cerebrospinal fluid pressure may be markedly exaggerated in the presence of head injury, other intracranial lesions or a pre-existing increase in intracranial pressure. Furthermore, narcotics produce adverse reaction which may obscure the clinical course of patients with head injuries.

**Acute Abdominal Conditions:** The administration of narcotics may obscure the diagnosis or clinical course of patients with acute abdominal conditions.

**PRECAUTIONS**

**General: Special Risk Patients:** As with any narcotic analgesic agent, NORCO® should be used with caution in elderly or debilitated patients and those with severe impairment of hepatic or renal function, hypothyroidism, Addison's disease, prostatic hypertrophy or urethral stricture. The usual precautions should be observed and the possibility of respiratory depression should be kept in mind.

**Cough Reflex:** Hydrocodone suppresses the cough reflex; as with all narcotics, caution should be exercised when NORCO® is used postoperatively and in patients with pulmonary disease.

**Information for Patients:** Hydrocodone, like all narcotics, may impair the mental and/or physical abilities required for the performance of potentially hazardous tasks such as driving a car or operating machinery; patients should be cautioned accordingly.

Alcohol and other CNS depressants may produce an additive CNS depression, when taken with this combination product, and should be avoided.

Hydrocodone may be habit-forming. Patients should take the drug only for as long as it is prescribed, in the amounts prescribed, and no more frequently than prescribed.

**Laboratory Tests:** In patients with severe hepatic or renal disease, effects of therapy should be monitored with serial liver and/or renal function tests.

**Drug Interactions:** Patients receiving other narcotics, antihistamines, antipsychotics, anti-anxiety agents, or other CNS depressants (including alcohol) concomitantly with NORCO® may exhibit an additive CNS depression. When combined therapy is contemplated, the dose of one or both agents should be reduced.

The use of MAO inhibitors or tricyclic antidepressants with hydrocodone preparations may increase the effect of either the antidepressant or hydrocodone.

**Drug/Laboratory Test Interactions:** Acetaminophen may produce false-positive test results for urinary 5-hydroxyindoleacetic acid.

**Carcinogenesis, Mutagenesis, Impairment of Fertility:** No adequate studies have been conducted in animals to determine whether hydrocodone or acetaminophen have a potential for carcinogenesis, mutagenesis, or impairment of fertility.

**Pregnancy: Teratogenic Effects: Pregnancy Category C:** There are no adequate and well-controlled studies in pregnant women. NORCO® should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

**Nonteratogenic Effects:** Babies born to mothers who have been taking opioids regularly prior to delivery will be physically dependent. The withdrawal signs include irritability and excessive crying, tremors, hyperactive reflexes, increased respiratory rate, increased stools, sneezing, yawning, vomiting, and fever. The intensity of the syndrome does not

always correlate with the duration of maternal opioid use or dose. There is no consensus on the best method of managing withdrawal.

**Labor and Delivery:** As with all narcotics, administration of this product to the mother shortly before delivery may result in some degree of respiratory depression in the newborn, especially if higher doses are used.

**Nursing Mothers:** Acetaminophen is excreted in breast milk in small amounts, but the significance of its effects on nursing infants is not known. It is not known whether hydrocodone is excreted in human milk. Because many drugs are excreted in human milk and because of the potential for serious adverse reactions in nursing infants from hydrocodone and acetaminophen, a decision should be made whether to discontinue nursing or to discontinue the drug, taking into account the importance of the drug to the mother.

**Pediatric Use:** Safety and effectiveness in pediatric patients have not been established.

### ADVERSE REACTIONS

The most frequently reported adverse reactions are lightheadedness, dizziness, sedation, nausea and vomiting. These effects seem to be more prominent in ambulatory than in nonambulatory patients, and some of these adverse reactions may be alleviated if the patient lies down.

Other adverse reactions include:

**Central Nervous System:** Drowsiness, mental clouding, lethargy, impairment of mental and physical performance, anxiety, fear, dysphoria, psychic dependence, mood changes.

**Gastrointestinal System:** Prolonged administration of NORCO® may produce constipation.

**Genitourinary System:** Ureteral spasm, spasm of vesical sphincters and urinary retention have been reported with opiates.

**Respiratory Depression:** Hydrocodone bitartrate may produce dose-related respiratory depression by acting directly on the brain stem respiratory centers (see OVERDOSAGE).

**Dermatological:** Skin rash, pruritus.

The following adverse drug events may be borne in mind as potential effects of acetaminophen: allergic reactions, rash, thrombocytopenia, agranulocytosis. Potential effects of high dosage are listed in the OVERDOSAGE section.

### DRUG ABUSE AND DEPENDENCE

**Controlled Substance:** NORCO® is classified as a Schedule III controlled substance.

**Abuse and Dependence:** Psychic dependence, physical dependence, and tolerance may develop upon repeated administration of narcotics; therefore, this product should be prescribed and administered with caution. However, psychic dependence is unlikely to develop when NORCO® is used for a short time for the treatment of pain.

**Physical dependence,** the condition in which continued administration of the drug is required to prevent the appearance of a withdrawal syndrome, assumes clinically significant proportions only after several weeks of continued narcotic use, although some mild degree of physical dependence may develop after a few days of narcotic therapy. Tolerance, in which increasingly large doses are required in order to produce the same degree of analgesia, is manifested initially by a shortened duration of analgesic effect, and subsequently by decreases in the intensity of analgesia. The rate of development of tolerance varies among patients.

### OVERDOSAGE

Following an acute overdosage, toxicity may result from hydrocodone or acetaminophen.

**Signs and Symptoms:** Hydrocodone: Serious overdose with hydrocodone is characterized by respiratory depression (a decrease in respiratory rate and/or tidal volume, Cheyne-Stokes respiration, cyanosis), extreme somnolence progressing to stupor or coma, skeletal muscle flaccidity, cold and clammy skin, and sometimes bradycardia and hypotension. In severe overdosage, apnea, circulatory collapse, cardiac arrest and death may occur.

Acetaminophen: In acetaminophen overdosage: dose-dependent, potentially fatal hepatic necrosis is the most serious adverse effect. Renal tubular necrosis, hypoglycemic coma, and thrombocytopenia may also occur.

Early symptoms following a potentially hepatotoxic overdose may include: nausea, vomiting, diaphoresis and general malaise. Clinical and laboratory evidence of hepatic toxicity may not be apparent until 48 to 72 hours post-ingestion.

In adults, hepatic toxicity has rarely been reported with acute overdoses of less than 10 grams, or fatalities with less than 15 grams.

**Treatment:** A single or multiple overdose with hydrocodone and acetaminophen is potentially lethal polydrug overdose, and consultation with a regional poison control center is recommended.

Immediate treatment includes support of cardiorespiratory function and measures to reduce drug absorption. Vomiting should be induced mechanically, or with syrup ipecac, if the patient is alert (adequate pharyngeal and laryngeal reflexes). Oral activated charcoal (1 g/kg) should follow gastric emptying. The first dose should be accompanied by an appropriate cathartic. If repeated doses are used, the cathartic might be included with alternate doses as required. Hypotension is usually hypovolemic and should respond to fluids. Vasopressors and other supportive measures should be employed as indicated. A cuffed endotracheal tube should be inserted before gastric lavage of the unconscious patient and, when necessary, to provide assisted respiration.

Meticulous attention should be given to maintaining adequate pulmonary ventilation. In severe cases of intoxication, peritoneal dialysis, or preferably hemodialysis may be considered. If hypoprothrombinemia occurs due to acetaminophen overdose, vitamin K should be administered intravenously.

Naloxone, a narcotic antagonist, can reverse respiratory depression and coma associated with opioid overdose. Naloxone hydrochloride 0.4 mg to 2 mg is given parenterally. Since the duration of action of hydrocodone may exceed that of the naloxone, the patient should be kept under continuous surveillance and repeated doses of the antagonist should be administered as needed to maintain adequate respiration. A narcotic antagonist should not be administered in the absence of clinically significant respiratory or cardiovascular depression.

If the dose of acetaminophen may have exceeded 140 mg/kg, acetylcysteine should be administered as early as possible. Serum acetaminophen levels should be obtained, since levels four or more hours following ingestion help predict acetaminophen toxicity. Do not await acetaminophen assay results before initiating treatment. Hepatic enzymes should be obtained initially, and repeated at 24-hour intervals.

Methemoglobinemia over 30% should be treated with methylene blue by slow intravenous administration.

The toxic dose for adults for acetaminophen is 10 g.

### DOSAGE AND ADMINISTRATION

Dosage should be adjusted according to the severity of the pain and the response of the patient. However, it should be kept in mind that tolerance to hydrocodone can develop with continued use and that the incidence of untoward effects is dose related.

The usual adult dosage is one tablet every four to six hours as needed for pain. The total daily dose should not exceed 6 tablets.

### HOW SUPPLIED

NORCO® 7.5/325 is available as capsule-shaped, light orange tablets bisected on one side and debossed with "NORCO 729" on the other side. Each tablet contains 7.5 mg hydrocodone bitartrate and 325 mg acetaminophen. They are supplied as follows:

Bottles of 30	NDC 52544-729-30
Bottles of 100	NDC 52544-729-01
Bottles of 500	NDC 52544-729-05

NORCO® 10/325 is available as capsule-shaped, yellow tablets bisected on one side and debossed with "NORCO 539" on the other side. Each tablet contains 10 mg hydrocodone bitartrate and 325 mg acetaminophen. They are supplied as follows:

Bottles of 100	NDC 52544-539-01
Bottles of 500	NDC 52544-539-05

Store at controlled room temperature 15°C to 30°C (59°F to 86°F).

Dispense in a tight, light-resistant container with a child-resistant closure.



Watson Pharma, Inc.  
a subsidiary of  
Watson Laboratories, Inc., Corona CA 92880

13897  
Revised: May '2000

**ATTACHMENT D**



**HYDROCODONE BITARTRATE AND ACETAMINOPHEN  
TABLETS, USP  
(10 mg/300 mg)**

**R<sub>x</sub> Only**

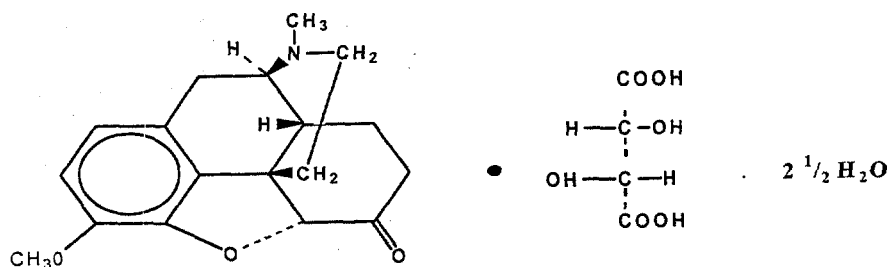
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Rev. 09/01

**DESCRIPTION**

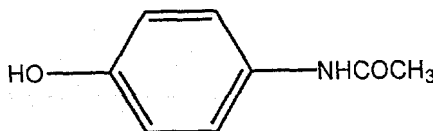
Hydrocodone Bitartrate and Acetaminophen Tablets is supplied in tablet form for oral administration.

Hydrocodone bitartrate is an opioid analgesic and antitussive and occurs as fine, white crystals or as a crystalline powder. It is affected by light. The chemical name is 4,5 $\alpha$ - epoxy-3-methoxy-17-methylmorphinan-6-one tartrate (1 :1) hydrate (2:5). It has the following structural formula:



MW = 494.50

Acetaminophen, 4'-hydroxyacetanilide, a slightly bitter, white, odorless, crystalline powder, is a non-opiate, non-salicylate analgesic and antipyretic. It has the following structural formula:



MW = 151.17

Hydrocodone Bitartrate and Acetaminophen Tablets, for oral administration is available in the following strength:

Hydrocodone Bitartrate*.....	10 mg
(*Warning: May be habit forming)	
Acetaminophen.....	300 mg

### **Inactive Ingredients:**

In accordance with good pharmaceutical practice and the provisions of USP 24 <1091> this section of the labeling will indicate the therapeutically inactive ingredients contained in this dosage form once established.

### **CLINICAL PHARMACOLOGY**

Hydrocodone is a semisynthetic narcotic analgesic and antitussive with multiple actions qualitatively similar to those of codeine. Most of these involve the central nervous system and smooth muscle. The precise mechanism of action of hydrocodone and other opiates is not known, although it is believed to relate to the existence of opiate receptors in the central nervous system. In addition to analgesia, narcotics may produce drowsiness, changes in mood and mental clouding.

The analgesic action of acetaminophen involves peripheral influences, but the specific mechanism is as yet undetermined. Antipyretic activity is mediated through hypothalamic heat regulating centers. Acetaminophen inhibits prostaglandin synthetase. Therapeutic doses of acetaminophen have negligible effects on the cardiovascular or respiratory systems; however, toxic doses may cause circulatory failure and rapid, shallow breathing.

**Pharmacokinetics:** The behavior of the individual components is described below.

Hydrocodone: Following a 10 mg oral dose of hydrocodone administered to five adult male subjects, the mean peak concentration was  $23.6 \pm 5.2$  ng/mL. Maximum serum levels were achieved at  $1.3 \pm 0.3$  hours and the half-life was determined to be  $3.8 \pm 0.3$  hours. Hydrocodone exhibits a complex pattern of metabolism including O-demethylation, N-demethylation and 6-ketoreduction to the corresponding 6-a- and 6- $\beta$ -hydroxymetabolites. See **OVERDOSAGE** for toxicity information.

Acetaminophen: Acetaminophen is rapidly absorbed from the gastrointestinal tract and is distributed throughout most body tissues. The plasma half-life is 1.25 to 3 hours, but may be increased by liver damage and following overdosage. Elimination of acetaminophen is principally by liver metabolism (conjugation) and subsequent renal excretion of metabolites. Approximately 85% of an oral dose appears in the urine within 24 hours of administration, most as the glucuronide conjugate, with small amounts of other conjugates and unchanged drug. See **OVERDOSAGE** for toxicity information.

### **INDICATIONS AND USAGE**

Hydrocodone Bitartrate and Acetaminophen Tablets is indicated for the relief of moderate to moderately severe pain.

## CONTRAINDICATIONS

Hydrocodone Bitartrate and Acetaminophen Tablets should not be administered to patients who have previously exhibited hypersensitivity to hydrocodone or acetaminophen.

## WARNINGS

**Respiratory Depression:** At high doses or in sensitive patients, hydrocodone may produce dose-related respiratory depression by acting directly on the brain stem respiratory center. Hydrocodone also affects the center that controls respiratory rhythm, and may produce irregular and periodic breathing.

**Head Injury and Increased Intracranial Pressure:** The respiratory depressant effects of narcotics and their capacity to elevate cerebrospinal fluid pressure may be markedly exaggerated in the presence of head injury, other intracranial lesions or a pre-existing increase in intracranial pressure. Furthermore, narcotics produce adverse reactions which may obscure the clinical course of patients with head injuries.

**Acute Abdominal Conditions:** The administration of narcotics may obscure the diagnosis or clinical course of patients with acute abdominal conditions.

## PRECAUTIONS

**General: Special Risk Patients:** As with any narcotic analgesic agent, Hydrocodone Bitartrate and Acetaminophen Tablets should be used with caution in elderly or debilitated patients and those with severe impairment of hepatic or renal function, hypothyroidism, Addison's disease, prostatic hypertrophy or urethral stricture. The usual precautions should be observed and the possibility of respiratory depression should be kept in mind.

**Cough Reflex:** Hydrocodone suppresses the cough reflex; as with all narcotics, caution should be exercised when Hydrocodone Bitartrate and Acetaminophen Tablets is used postoperatively and in patients with pulmonary disease.

**Information for Patients:** Hydrocodone, like all narcotics, may impair mental and/or physical abilities required for the performance of potentially hazardous tasks such as driving a car or operating machinery; patients should be cautioned accordingly.

Alcohol and other CNS depressants may produce an additive CNS depression, when taken with this combination product, and should be avoided.

Hydrocodone may be habit-forming. Patients should take the drug only for as long as it is prescribed, in the amounts prescribed, and no more frequently than prescribed.

**Laboratory Tests:** In patients with severe hepatic or renal disease, effects of therapy should be monitored with serial liver and/or renal function tests.

**Drug Interactions:** Patients receiving other narcotics, antihistamines, antipsychotics, antianxiety agents, or other CNS depressants (including alcohol) concomitantly with Hydrocodone Bitartrate and Acetaminophen Tablets, USP may exhibit an additive CNS depression. When combined therapy is contemplated, the dose of one or both agents should be reduced.

The use of MAO inhibitors or tricyclic antidepressants with hydrocodone preparations may increase the effect of either the antidepressant or hydrocodone.

**Drug/Laboratory Test Interactions:** Acetaminophen may produce false-positive test results for urinary 5-hydroxyindoleacetic acid.

**Carcinogenesis, Mutagenesis, Impairment of Fertility:** No adequate studies have been conducted in animals to determine whether hydrocodone or acetaminophen have a potential for carcinogenesis, mutagenesis, or impairment of fertility.

**Pregnancy:** Teratogenic Effects: *Pregnancy Category C:* There are no adequate and well-controlled studies in pregnant women. Hydrocodone Bitartrate and Acetaminophen Tablets should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nonteratogenic Effects: Babies born to mothers who have been taking opioids regularly prior to delivery will be physically dependent. The withdrawal signs include irritability and excessive crying, tremors, hyperactive reflexes, increased respiratory rate, increased stools, sneezing, yawning, vomiting, and fever. The intensity of the syndrome does not always correlate with the duration of maternal opioid use or dose. There is no consensus on the best method of managing withdrawal.

**Labor and Delivery:** As with all narcotics, administration of this product to the mother shortly before delivery may result in some degree of respiratory depression in the newborn, especially if higher doses are used.

**Nursing Mothers:** Acetaminophen is excreted in breast milk in small amounts, but the significance of its effects on nursing infants is not known. It is not known whether hydrocodone is excreted in human milk. Because many drugs are excreted in human milk and because of the potential for serious adverse reactions in nursing infants from hydrocodone and acetaminophen, a decision should be made whether to discontinue nursing or to discontinue the drug, taking into account the importance of the drug to the mother,

**Pediatric Use:** Safety and effectiveness in pediatric patients have not been established.

## ADVERSE REACTIONS

The most frequently reported adverse reactions are lightheadedness, dizziness, sedation, nausea and vomiting. These effects seem to be more prominent in ambulatory than in non-ambulatory patients, and some of these adverse reactions may be alleviated if the patient lies down.



Other adverse reactions include:

**Central Nervous System:** Drowsiness, mental clouding, lethargy, impairment of mental and physical performance, anxiety, fear, dysphoria, psychic dependence, mood changes.

**Gastrointestinal System:** Prolonged administration of Hydrocodone Bitartrate and Acetaminophen Tablets may produce constipation.

**Genitourinary System:** Ureteral spasm, spasm of vesical sphincters and urinary retention have been reported with opiates.

**Respiratory Depression:** Hydrocodone bitartrate may produce dose-related respiratory depression by acting directly on the brain stem respiratory centers (see **OVERDOSAGE**).

**Dermatological:** Skin rash, pruritus.

The following adverse drug events may be borne in mind as potential effects of acetaminophen: allergic reactions, rash, thrombocytopenia, agranulocytosis. Potential effects of high dosage are listed in the **OVERDOSAGE** section.

#### **DRUG ABUSE AND DEPENDENCE**

**Controlled Substance:** Hydrocodone Bitartrate and Acetaminophen Tablets is classified as a Schedule III controlled substance.

**Abuse and Dependence:** Psychic dependence, physical dependence, and tolerance may develop upon repeated administration of narcotics; therefore, this product should be prescribed and administered with caution. However, psychic dependence is unlikely to develop when hydrocodone bitartrate and acetaminophen tablets is used for a short time for the treatment of pain.

Physical dependence, the condition in which continued administration of the drug is required to prevent the appearance of a withdrawal syndrome, assumes clinically significant proportions only after several weeks of continued narcotic use, although some mild degree of physical dependence may develop after a few days of narcotic therapy. Tolerance, in which increasingly large doses are required in order to produce the same degree of analgesia, is manifested initially by a shortened duration of analgesic effect, and subsequently by decreases in the intensity of analgesia. The rate of development of tolerance varies among patients.

## **OVERDOSAGE:**

Following an acute overdose, toxicity may result from hydrocodone or acetaminophen.

**Signs and Symptoms:** Hydrocodone: Serious overdose with hydrocodone is characterized by respiratory depression (a decrease in respiratory rate and/or tidal volume, Cheyne-Stokes respiration, cyanosis), extreme somnolence progressing to stupor or coma, skeletal muscle flaccidity, cold and clammy skin, and sometimes bradycardia and hypotension. In severe overdose, apnea, circulatory collapse, cardiac arrest and death may occur.

Acetaminophen: In acetaminophen overdose: dose-dependent, potentially fatal hepatic necrosis is the most serious adverse effect. Renal tubular necrosis, hypoglycemic coma, and thrombocytopenia may also occur.

Early symptoms following a potentially hepatotoxic overdose may include: nausea, vomiting, diaphoresis and general malaise. Clinical and laboratory evidence of hepatic toxicity may not be apparent until 48 to 72 hours post-ingestion.

In adults, hepatic toxicity has rarely been reported with acute overdoses of less than 10 grams, or fatalities with less than 15 grams.

**Treatment:** A single or multiple overdose with hydrocodone and acetaminophen is a potentially lethal polydrug overdose, and consultation with a regional poison control center is recommended.

Immediate treatment includes support of cardiorespiratory function and measures to reduce drug absorption. Vomiting should be induced mechanically, or with syrup of ipecac, if the patient is alert (adequate pharyngeal and laryngeal reflexes). Oral activated charcoal (1 g/kg) should follow gastric emptying. The first dose should be accompanied by an appropriate cathartic. If repeated doses are used, the cathartic might be included with alternate doses as required. Hypotension is usually hypovolemic and should respond to fluids. Vasopressors and other supportive measures should be employed as indicated. A cuffed endo-tracheal tube should be inserted before gastric lavage of the unconscious patient and, when necessary, to provide assisted respiration.

Meticulous attention should be given to maintaining adequate pulmonary ventilation. In severe cases of intoxication, peritoneal dialysis, or preferably hemodialysis may be considered. If hypoprothrombinemia occurs due to acetaminophen overdose, vitamin K should be administered intravenously.

Naloxone, a narcotic antagonist, can reverse respiratory depression and coma associated with opioid overdose. Naloxone hydrochloride 0.4 mg to 2 mg is given parenterally. Since the duration of action of hydrocodone may exceed that of naloxone, the patient should be kept under continuous surveillance and repeated doses of the antagonist should be administered as needed to maintain adequate respiration. A narcotic antagonist should not be administered in the absence of clinically significant respiratory or cardiovascular depression.

If the dose of acetaminophen may have exceeded 140 mg/kg, acetylcysteine should be administered as early as possible. Serum acetaminophen levels should be obtained, since levels four or more hours following ingestion help predict acetaminophen toxicity. Do not await acetaminophen assay results before initiating treatment. Hepatic enzymes should be obtained initially, and repeated at 24-hour intervals.

Methemoglobinemia over 30% should be treated with methylene blue by slow intravenous administration.

The toxic dose for adults for acetaminophen is 10 g.

### **DOSAGE AND ADMINISTRATION**

Dosage should be adjusted according to the severity of the pain and the response of the patient. However, it should be kept in mind that tolerance to hydrocodone can develop with continued use and that the incidence of untoward effects is dose related.

The usual adult dosage is one tablet every four to six hours as needed for pain. The total daily dose should not exceed 6 tablets.

### **HOW SUPPLIED:**

Hydrocodone Bitartrate and Acetaminophen Tablets, USP 10 mg/300 mg

**Dosage Form:** Tablets

**Shape, Color, and Scoring:** To be determined.

**Packaging:** To be determined.

**STORAGE:** Store at controlled room temperature 15° to 30°C (59° to 86°F) (See USP).

**PHARMACIST:** Dispense in a tight, light-resistant container with a child-resistant closure.

A Schedule CIII Narcotic.

Manufactured by:  
Manufacturer

Code 000000  
Rev. 09/01

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