

OBJECTIVES

- ❖ To describe the **first reported case** of allergic contact dermatitis resulting from **benzisothiazolinone** (BIT) in a **personal care product** (PCP)

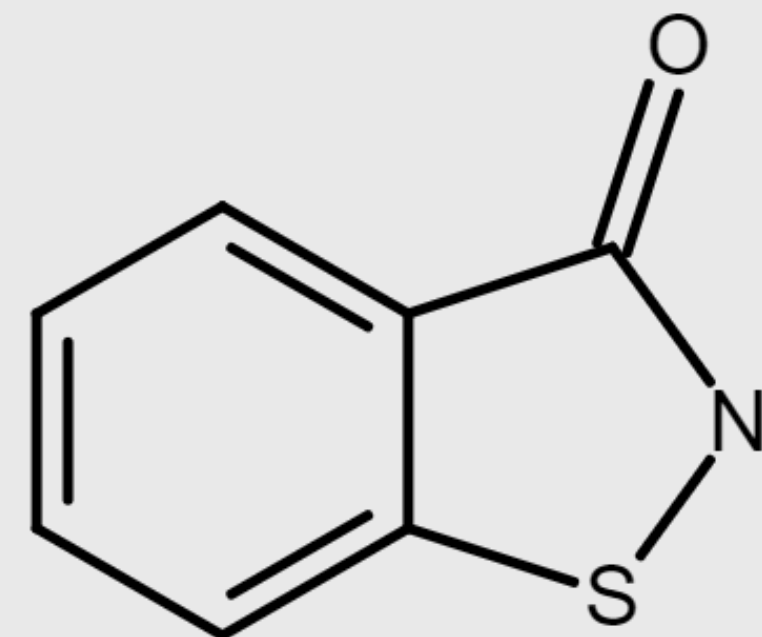


Figure 1. The chemical structure of BIT

CASE

- ❖ 35-year-old female with 3-month history of **bilateral hand dermatitis**
- ❖ **Symptoms started after a recent cross-country move** to Minnesota
- ❖ Topical corticosteroids, crisaborole, oral cephalexin, and intramuscular triamcinolone were ineffective



Figure 2. Patient's hands show diffuse erythema, sheet-like desquamation, and webspace involvement



PATCH TESTING

- ❖ 2019-2020 NACDG Screening Series
- ❖ Rubbers
- ❖ Corticosteroids
- ❖ Medicaments
- ❖ Emulsifiers
- ❖ **Home products**
- ❖ Preservatives

RESULTS

Allergen	Reaction
BIT	++
Nickel (2.5, 5%)	++
Bronopol	+/-
MCI/MI (x2)	--
MI (x2)	--
OIT	--



Figure 3. Final patch-test reading is notable for a strong (++) reaction to BIT

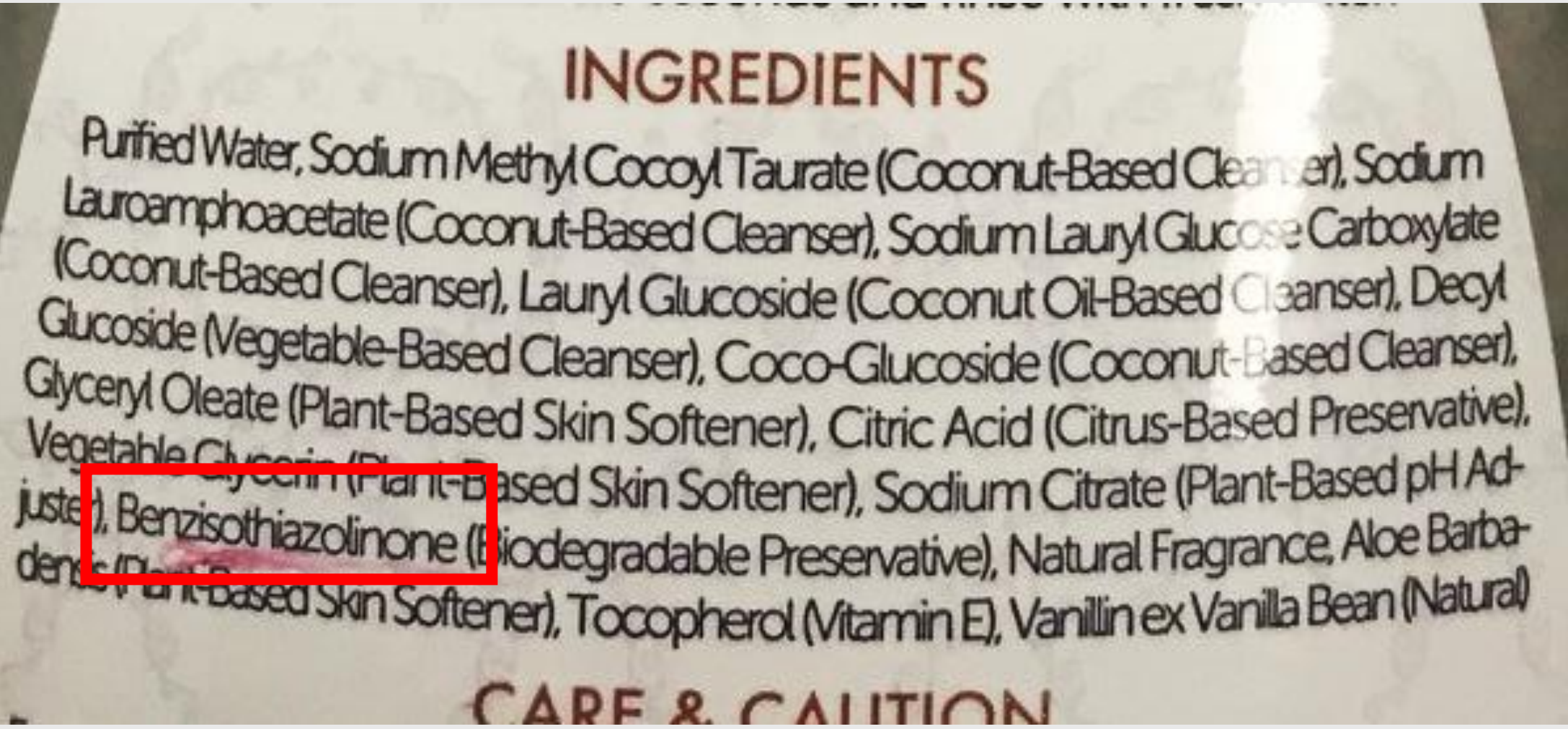


Figure 4. Puracy Lavender & Vanilla Hand Soap, purchased shortly after the patient moved to Minnesota, lists BIT as an ingredient

DISCUSSION

- ❖ Products designed for use on human skin are regulated differently from those *not* designed for use on human skin
- ❖ BIT is a biocide and fungicide banned for use in PCPs in Europe, but **remains in US with no prohibitive regulations**¹
- ❖ While other isothiazolinones (MCI/MI) are routinely found in hand soaps, **BIT has historically been used in products not designed for human skin** such as paints, varnishes, cleaners, and detergents^{1,2}
- ❖ Per the US Food and Drug Administration's Voluntary Cosmetics Registration Program, **BIT has not been reported in PCPs**³
- ❖ Case reports document allergy to BIT in CPAP wash, PVC gloves, and glues^{4,5}
- ❖ Previous analyses find all-purpose cleaners as the most common source of exposure; PCPs were not reported^{4,5}
- ❖ While our patient was exposed to BIT in her household cleaners, **daily exposure to BIT in her hand soap is very relevant**
- ❖ This case underscores the importance of investigating PCPs for identified allergens, even when not anticipated
- ❖ Clinicians should be aware of BIT in PCPs

REFERENCES

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