

# Hamster Groomers Smart Contracts Audit

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## CONFIDENTIAL

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1. **INTRODUCTION.** Hamster Groomers requested 4irelabs a review of the contract implementing their ERC20 token.

There are 3 contracts source code in scope.

2. **WARRANTY.** Audit is provided on an "as is" basis, without warranty of any kind, express or implied. The Auditor does not guarantee that the Code Review will identify all instances of security vulnerabilities or other related issues.
3. **EXECUTIVE SUMMARY.** 2 Low/Note issues have been found. There are no known compiler bugs, for the specified compiler version, that might affect the contracts logic.
4. **CRITICAL BUGS AND VULNERABILITIES.** No Critical and Major issues have been found.

## 5. LINE BY LINE REVIEW.

### 5.1. ERC20.sol:

**5.1.1.** Line 10. Note: Import of unused testing library "hardhat/console.sol".

**5.1.2.** Line 263. Low: Dust transfers would avoid paying any fees due to integer rounding. For example, it would be possible to send 49 wei of tokens with 0 fees, since 2% of 49 would be rounded down to 0.

*Recommendation:* If it's crucial to prevent transfers to or from a trading pair that has zero fees, consider adding a validation that checks if the fee is greater than zero when a non-zero amount is being transferred.

### 5.2. Fees.sol:

**5.2.1.** Line 6–11. Gas optimization: Fees variables and denominator could be declared as constants as they never change.

### 5.3. Documentation and contracts code mismatches:

**5.3.1.** Readme doc in contract repo declares decimals() function as onlyOwner gated, while it's not.