



# Cyberscope

## Audit Report

# **FxRumble**

May 2023

Network    BSC

Address    0x7fDBcd8FFFBa514fcDD876354506dC9452f9b0e9

Audited by    © cyberscope

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## Review

|                  |                                                                                                                                                           |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Contract Name    | FXRUMBLE                                                                                                                                                  |
| Compiler Version | v0.8.7+commit.e28d00a7                                                                                                                                    |
| Optimization     | 200 runs                                                                                                                                                  |
| Explorer         | <a href="https://bscscan.com/address/0x7fdbcd8ffba514fcdd876354506dc9452f9b0e9">https://bscscan.com/address/0x7fdbcd8ffba514fcdd876354506dc9452f9b0e9</a> |
| Address          | 0x7fdbcd8ffba514fcdd876354506dc9452f9b0e9                                                                                                                 |
| Network          | BSC                                                                                                                                                       |
| Symbol           | FXRUMBLE                                                                                                                                                  |
| Decimals         | 2                                                                                                                                                         |
| Total Supply     | 1.000.000.000                                                                                                                                             |

## Audit Updates

|               |             |
|---------------|-------------|
| Initial Audit | 03 May 2023 |
|---------------|-------------|

## Source Files

|              |                                                                  |
|--------------|------------------------------------------------------------------|
| Filename     | SHA256                                                           |
| FXRUMBLE.sol | 51f7b8358cf865fcf21c02969156912b06f1db75aaad695a5ba4d09195765788 |

## Findings Breakdown



|                       |   |
|-----------------------|---|
| ● Critical            | 0 |
| ● Medium              | 0 |
| ● Minor / Informative | 4 |

| Severity              | Unresolved | Acknowledged | Resolved | Other |
|-----------------------|------------|--------------|----------|-------|
| ● Critical            | 0          | 0            | 0        | 0     |
| ● Medium              | 0          | 0            | 0        | 0     |
| ● Minor / Informative | 4          | 0            | 0        | 0     |

## Note

The contract uses 2 decimal points. This may produce precision issues if the initial price of the token is relatively high. For instance, if 1 \$FXRUMBLE is worth 1000 \$USDT, then the users will not be able to trade less than 10 \$USDT worth of \$FXRUMBLE. If a user tries to buy \$FXRUMBLE for 1 \$USDT, then he will receive 0 \$FXRUMBLE because of the decimals precision.

# Analysis

● Critical   ● Medium   ● Minor / Informative   ● Pass

| Severity | Code | Description                        | Status |
|----------|------|------------------------------------|--------|
| ●        | ST   | Stops Transactions                 | Passed |
| ●        | OCTD | Transfers Contract's Tokens        | Passed |
| ●        | OTUT | Transfers User's Tokens            | Passed |
| ●        | ELFM | Exceeds Fees Limit                 | Passed |
| ●        | ULTW | Transfers Liquidity to Team Wallet | Passed |
| ●        | MT   | Mints Tokens                       | Passed |
| ●        | BT   | Burns Tokens                       | Passed |
| ●        | BC   | Blacklists Addresses               | Passed |

## Diagnostics

● Critical ● Medium ● Minor / Informative

| Severity | Code | Description                    | Status     |
|----------|------|--------------------------------|------------|
| ●        | RSML | Redundant SafeMath Library     | Unresolved |
| ●        | L09  | Dead Code Elimination          | Unresolved |
| ●        | L15  | Local Scope Variable Shadowing | Unresolved |
| ●        | L19  | Stable Compiler Version        | Unresolved |

## RSML - Redundant SafeMath Library

|             |                     |
|-------------|---------------------|
| Criticality | Minor / Informative |
| Location    | FXRUMBLE.sol        |
| Status      | Unresolved          |

### Description

SafeMath is a popular Solidity library that provides a set of functions for performing common arithmetic operations in a way that is resistant to integer overflows and underflows.

Starting with Solidity versions that are greater than or equal to 0.8.0, the arithmetic operations revert to underflow and overflow. As a result, the native functionality of the Solidity operations replaces the SafeMath library. Hence, the usage of the SafeMath library adds complexity, overhead and increases gas consumption unnecessarily.

```
library SafeMath {...}
```

### Recommendation

The team is advised to remove the SafeMath library. Since the version of the contract is greater than `0.8.0` then the pure Solidity arithmetic operations produce the same result.

If the previous functionality is required, then the contract could exploit the `unchecked { ... }` statement.

Read more about the breaking change on

<https://docs.soliditylang.org/en/v0.8.16/080-breaking-changes.html#solidity-v0-8-0-breaking-changes>.

## L09 - Dead Code Elimination

|             |                     |
|-------------|---------------------|
| Criticality | Minor / Informative |
| Location    | FXRUMBLE.sol#L208   |
| Status      | Unresolved          |

### Description

In Solidity, dead code is code that is written in the contract, but is never executed or reached during normal contract execution. Dead code can occur for a variety of reasons, such as:

- Conditional statements that are always false.
- Functions that are never called.
- Unreachable code (e.g., code that follows a return statement).

Dead code can make a contract more difficult to understand and maintain, and can also increase the size of the contract and the cost of deploying and interacting with it.

```
function _burn(address account, uint256 amount) internal
virtual {
    require(account != address(0), "BEP20: burn from the
zero address");
    _beforeTokenTransfer(account, address(0), amount);
    uint256 accountBalance = _balances[account];
    require(accountBalance >= amount, "BEP20: burn amount
exceeds balance");
    unchecked {
        _balances[account] = accountBalance.sub(amount);
    }
    emit Transfer(account, address(0), amount);
    _afterTokenTransfer(account, address(0), amount);
}
```

### Recommendation

To avoid creating dead code, it's important to carefully consider the logic and flow of the contract and to remove any code that is not needed or that is never executed. This can help improve the clarity and efficiency of the contract.

## L15 - Local Scope Variable Shadowing

|                    |                     |
|--------------------|---------------------|
| <b>Criticality</b> | Minor / Informative |
| <b>Location</b>    | FXRUMBLE.sol#L260   |
| <b>Status</b>      | Unresolved          |

### Description

Local scope variable shadowing occurs when a local variable with the same name as a variable in an outer scope is declared within a function or code block. When this happens, the local variable "shadows" the outer variable, meaning that it takes precedence over the outer variable within the scope in which it is declared.

```
uint256 totalSupply  
string memory symbol
```

### Recommendation

It's important to be aware of shadowing when working with local variables, as it can lead to confusion and unintended consequences if not used correctly. It's generally a good idea to choose unique names for local variables to avoid shadowing outer variables and causing confusion.

## L19 - Stable Compiler Version

|                    |                     |
|--------------------|---------------------|
| <b>Criticality</b> | Minor / Informative |
| <b>Location</b>    | FXRUMBLE.sol#L2     |
| <b>Status</b>      | Unresolved          |

### Description

The `^` symbol indicates that any version of Solidity that is compatible with the specified version (i.e., any version that is a higher minor or patch version) can be used to compile the contract. The version lock is a mechanism that allows the author to specify a minimum version of the Solidity compiler that must be used to compile the contract code. This is useful because it ensures that the contract will be compiled using a version of the compiler that is known to be compatible with the code.

```
pragma solidity ^0.8.0;
```

### Recommendation

The team is advised to lock the pragma to ensure the stability of the codebase. The locked pragma version ensures that the contract will not be deployed with an unexpected version. An unexpected version may produce vulnerabilities and undiscovered bugs. The compiler should be configured to the lowest version that provides all the required functionality for the codebase. As a result, the project will be compiled in a well-tested LTS (Long Term Support) environment.

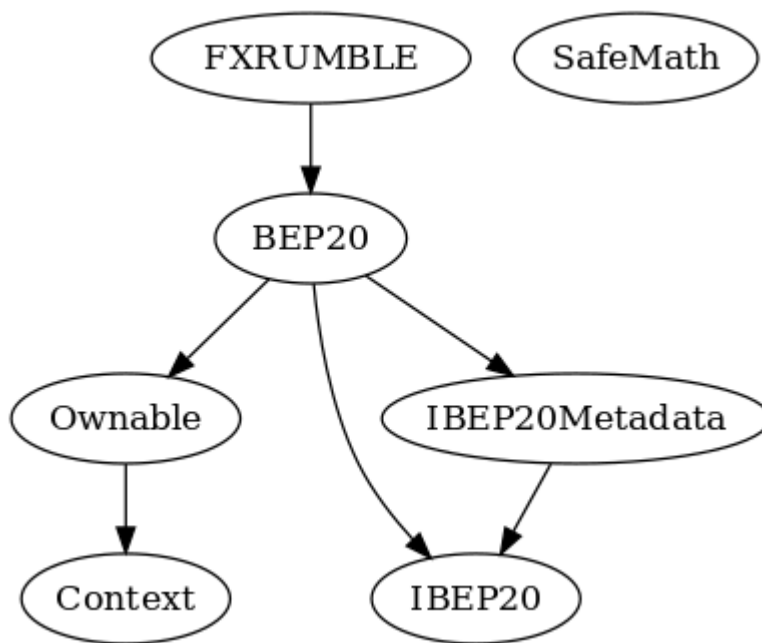
## Functions Analysis

| Contract        | Type              | Bases      |            |           |
|-----------------|-------------------|------------|------------|-----------|
|                 | Function Name     | Visibility | Mutability | Modifiers |
|                 |                   |            |            |           |
| <b>Context</b>  | Implementation    |            |            |           |
|                 | _msgSender        | Internal   |            |           |
|                 | _msgData          | Internal   |            |           |
|                 |                   |            |            |           |
| <b>Ownable</b>  | Implementation    | Context    |            |           |
|                 |                   | Public     | ✓          | -         |
|                 | owner             | Public     |            | -         |
|                 | transferOwnership | Public     | ✓          | onlyOwner |
|                 |                   |            |            |           |
| <b>IBEP20</b>   | Interface         |            |            |           |
|                 | totalSupply       | External   |            | -         |
|                 | balanceOf         | External   |            | -         |
|                 | transfer          | External   | ✓          | -         |
|                 | allowance         | External   |            | -         |
|                 | approve           | External   | ✓          | -         |
|                 | transferFrom      | External   | ✓          | -         |
|                 |                   |            |            |           |
| <b>SafeMath</b> | Library           |            |            |           |

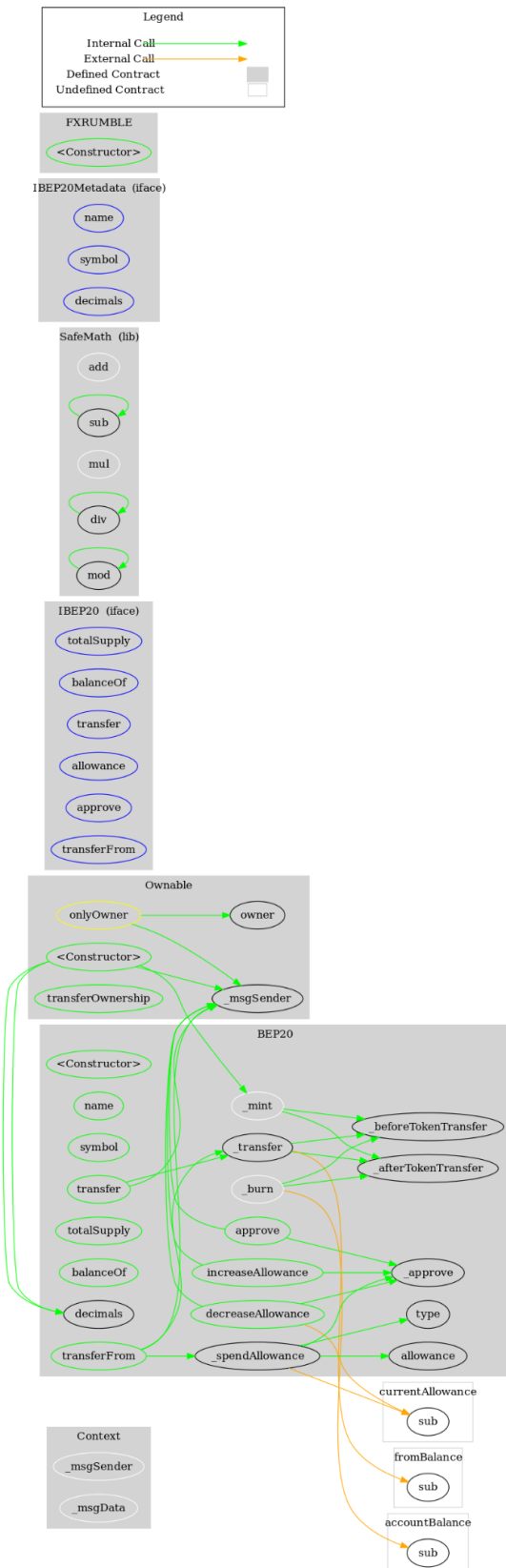
|                       |                |                                           |   |   |
|-----------------------|----------------|-------------------------------------------|---|---|
|                       | add            | Internal                                  |   |   |
|                       | sub            | Internal                                  |   |   |
|                       | sub            | Internal                                  |   |   |
|                       | mul            | Internal                                  |   |   |
|                       | div            | Internal                                  |   |   |
|                       | div            | Internal                                  |   |   |
|                       | mod            | Internal                                  |   |   |
|                       | mod            | Internal                                  |   |   |
|                       |                |                                           |   |   |
| <b>IBEP20Metadata</b> | Interface      | IBEP20                                    |   |   |
|                       | name           | External                                  |   | - |
|                       | symbol         | External                                  |   | - |
|                       | decimals       | External                                  |   | - |
|                       |                |                                           |   |   |
| <b>BEP20</b>          | Implementation | Ownable,<br>IBEP20,<br>IBEP20Meta<br>data |   |   |
|                       |                | Public                                    | ✓ | - |
|                       | name           | Public                                    |   | - |
|                       | symbol         | Public                                    |   | - |
|                       | decimals       | Public                                    |   | - |
|                       | totalSupply    | Public                                    |   | - |
|                       | balanceOf      | Public                                    |   | - |
|                       | transfer       | Public                                    | ✓ | - |

|                 |                      |          |   |       |
|-----------------|----------------------|----------|---|-------|
|                 | allowance            | Public   |   | -     |
|                 | approve              | Public   | ✓ | -     |
|                 | transferFrom         | Public   | ✓ | -     |
|                 | increaseAllowance    | Public   | ✓ | -     |
|                 | decreaseAllowance    | Public   | ✓ | -     |
|                 | _transfer            | Internal | ✓ |       |
|                 | _mint                | Internal | ✓ |       |
|                 | _burn                | Internal | ✓ |       |
|                 | _approve             | Internal | ✓ |       |
|                 | _spendAllowance      | Internal | ✓ |       |
|                 | _beforeTokenTransfer | Internal | ✓ |       |
|                 | _afterTokenTransfer  | Internal | ✓ |       |
|                 |                      |          |   |       |
| <b>FXRUMBLE</b> | Implementation       | BEP20    |   |       |
|                 |                      | Public   | ✓ | BEP20 |

## Inheritance Graph



# Flow Graph



## Summary

FxBumble contract implements a token mechanism. This audit investigates security issues, business logic concerns and potential improvements. FxBumble is an interesting project that has a friendly and growing community. The Smart Contract analysis reported no compiler error or critical issues. The contract Owner can access some admin functions that can not be used in a malicious way to disturb the users' transactions.

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## About Cyberscope

Cyberscope is a blockchain cybersecurity company that was founded with the vision to make web3.0 a safer place for investors and developers. Since its launch, it has worked with thousands of projects and is estimated to have secured tens of millions of investors' funds.

Cyberscope is one of the leading smart contract audit firms in the crypto space and has built a high-profile network of clients and partners.



**The Cyberscope team**

<https://www.cyberscope.io>