

# Advanced Manual Smart Contract Audit



Project: AlchemyCrypto

Website: https://alchemycrypto.app/#/home



3 low-risk code issues found

### Medium-Risk

1 medium-risk code issues found

### High-Risk

0 high-risk code issues found

#### **Contract Address**

Not yet deployed

Disclaimer: Coinsult is not responsible for any financial losses. Nothing in this contract audit is financial advice, please do your own research.

### Disclaimer

Coinsult is not responsible if a project turns out to be a scam, rug-pull or honeypot. We only provide a detailed analysis for your own research.

Coinsult is not responsible for any financial losses. Nothing in this contract audit is financial advice, please do your own research.

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### **Tokenomics**

Not available

### Source Code

Coinsult was comissioned by AlchemyCrypto to perform an audit based on the following smart contract:

https://github.com/AlchemyCryptoBSC/SmartContract/blob/main/AlchemyCryptoToken.sol

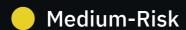
While Coinsult checks the main contract for issues we can't guarantee the correctness and legitness of proxied contracts over-time. Furthermore Coinsult does not check the imports within the main contract. Always DYOR.

## **Manual Code Review**

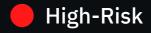
In this audit report we will highlight all these issues:



3 low-risk code issues found



1 medium-risk code issues found



0 high-risk code issues found

The detailed report continues on the next page...

**Low-Risk:** Could be fixed, will not bring problems.

#### **Too many digits**

Literals with many digits are difficult to read and review.

```
_totalSupply = 50000000 * (10 ** uint256(_decimals));
```

#### **Recommendation**

Use: Ether suffix, Time suffix, or The scientific notation

### **Exploit scenario**

```
contract MyContract{
    uint 1_ether = 100000000000000000000;
}
```

While 1\_ether looks like 1 ether, it is 10 ether. As a result, it's likely to be used incorrectly.

**Low-Risk:** Could be fixed, will not bring problems.

#### No zero address validation for some functions

Detect missing zero address validation.

```
function addMinter(address minter) public onlyOwner {
    _minters[minter] = true;
}
```

#### Recommendation

Check that the new address is not zero.

#### **Exploit scenario**

```
contract C {

modifier onlyAdmin {
   if (msg.sender != owner) throw;
   _;
}

function updateOwner(address newOwner) onlyAdmin external {
   owner = newOwner;
}
```

Bob calls updateOwner without specifying the newOwner, soBob loses ownership of the contract.

**Low-Risk:** Could be fixed, will not bring problems.

#### **Divide before multiply**

Solidity integer division might truncate. As a result, performing multiplication before division can sometimes avoid loss of precision.

```
uint8 temp = (48 + uint8(_i - _i / 10 * 10));
```

#### Recommendation

Consider ordering multiplication before division.

### **Exploit scenario**

```
contract A {
   function f(uint n) public {
      coins = (oldSupply / n) * interest;
   }
}
```

If n is greater than oldSupply, coins will be zero. For example, with oldSupply = 5; n = 10, interest = 2, coins will be zero. If (oldSupply \* interest / n) was used, coins would have been 1. In general, it's usually a good idea to re-arrange arithmetic to perform multiplication before division, unless the limit of a smaller type makes this dangerous.

Medium-Risk: Should be fixed, could bring problems.

#### **Owner can mint new tokens**

```
function mint(address _to, uint256 _amount) onlyMinter public returns (bool) {
   uint256 tmpTotal = currentSupply + _amount;
   require(tmpTotal <= _totalSupply, &quot;mint too much&quot;);
   currentSupply = currentSupply + _amount;
   balances[_to] = balances[_to] + _amount;
   emit Mint(_to, _amount);
   emit Transfer(address(0), _to, _amount);
   return true;
}
```

#### **Recommendation**

No recommendation

## **Owner privileges**

- Owner can change max transaction amount
- Owner can set fees higher than 25%
- Owner can exclude from fees
- Owner can pause the contract
- Owner can mint new tokens

Owner can add new minter addresses

### Extra notes by the team

No notes

## **Contract Snapshot**

```
contract A_AlchemyCryptoToken is GlobalImpl, IERC20 {
   IAddressManager public addressManager;
   bool public pause = false;

   string _name;
   string _symbol;
   uint8 _decimals;
   // max supply
   uint256 _totalSupply;
   // current supply
   uint256 public currentSupply = 0;
```

## **Project Overview**



Not KYC verified by Coinsult

